

**C930**

**Edition 9.3**

**Issued on November 2010**

# IP Device User Manual

For INC-TS/TE Series IP Camera

INS-SC/SE series IP Speed Dome

IVS-5000 Series IP Video Server

INC-MP13/20/50 Mega Pixel IP Camera

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchasers for backup purposes, without the express written permission of ILDVR Digital Technology. (“ILDVR”)

Product warranty or service will not be extended if: (1) the product is repaired, modified, or altered, unless such repair, modification of alteration is authorized in writing by ILDVR; or (2) the serial number of the product is defaced or missing.

ILDVR PROVIDES THIS MANUAL “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ILDVR, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSINESS AND THE LIKE), EVEN IF ILDVR HAS BEEN ADVISED OR THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FURNISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY ILDVR. INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners’ benefit, without intent to infringe.

**Copyright © 2009 ILDVR DIGITAL TECHNOLOGY all rights reserved.**

**ILDVR Global Distribution & Service**

Hungary: [www.ildvr.hu](http://www.ildvr.hu)

# Directory

<b>Introduction</b> .....	1
<b>1 Product Features and Specifications</b> .....	3
1.1 Compression.....	3
1.2 Network.....	3
1.3 IP Camera Specification.....	4
1.4 IP Speed Dome Specification.....	6
1.5 IP Video Server Specification .....	8
<b>2 Installation</b> .....	9
2.1 Before Installation.....	9
2.2 Prepare Audio Connector.....	10
2.3 IP Camera Installation.....	10
2.4 IP Speed Dome Installation.....	13
2.4.1 Setup PTZ Protocol and Default Baud Rate.....	13
2.4.2 Setup PTZ Address.....	17
2.4.3 Dimension of Product.....	19
2.4.4 Outdoor Wall Mount.....	20
2.4.5 Outdoor Pedant Mount.....	21
2.4.6 Indoor Drop Ceiling Mount.....	22
2.4.7 Indoor Recess Mount.....	23
2.4.8 Alarm in and Alarm out Port.....	24
2.4.9 Overall Reviewing.....	25
2.5 IP Video Server Installation.....	26
2.5.1 IP Server INS-5001HS.....	26
2.5.2 IP Server NS-5000HC/HD series.....	29
<b>3 Network Operation</b> .....	32

3.1	Reset IP Address for New Network.....	32
3.1.1	Use IP Capture.....	32
3.1.2	Use IE to Change IP.....	33
3.2	IE Web Client Operation.....	34
3.2.1	Login to IP Device.....	34
3.2.2	Remote Live Viewing.....	37
3.2.3	Remote Setup.....	41
3.2.4	Remote Search and Download.....	51
3.3	Video Record by Hybrid DVR Server .....	53
3.4	Live Center Operation.....	53
3.5	CMS Operation.....	53
 <b>Appendix A</b> Pin definition of RS232.....		54
<b>Appendix B</b> Pin definition of Ethernet.....		57
<b>Appendix C</b> Compatible SD card list.....		58

## Introduction of IP-CCTV Solutions

Thank you for using the ILDVR<sup>®</sup> IP video surveillance system. This operation manual illustrates how to set up the hardware and software. It also helps to explain each individual icon function and demonstrates how to use the system effectively in a stable environment. Prior to installing the system, operators should go through this manual thoroughly. Local suppliers may support them in due course.

### IP-CCTV Product Lines

Item	Product Name	Video Record Type	Reasons for choosing...
1	PC-DVR (DVR card)	Local HDD	High resolution and high quality video images with a friendly GUI interface. It's convenient to operate, easy to expand the cameras, and possesses powerful integration capabilities.
2	NetDVR (Stand Alone)	Local HDD	Stable, with no risk of computer viruses. Requires very low maintenance.
3	IP Camera	Local SD card and network	This is the next generation product in security surveillance. This product has everything you need, all built into one! The IP Camera is very cost effective and incredibly easy to install
4	IP Speed Dome	Network stream	This has all the traditional high speed dome features, but overcomes the coaxial cable distance limitation.
5	IP Video Server	Network stream (5001HS both SD card and network)	Convert your existing analog camera to an IP camera. Use this to upgrade your existing CCTV system to an IP-CCTV system
6	IP Matrix/TV-wall	N/A	For large scale surveillance system.

# ILDVR IP-CCTV Solution hardware&software structure



# 1 Product Features and Specifications

## 1.1 Compression

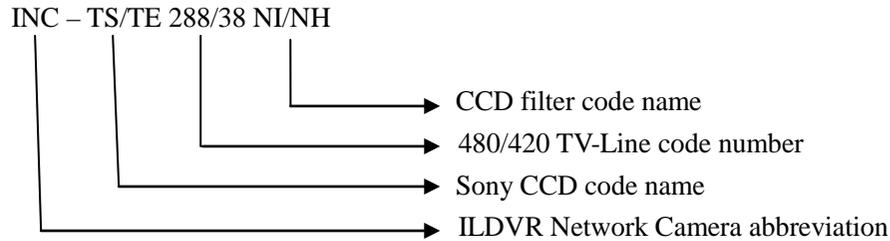
- H.264 hardware compression. Every camera can be real-time hardware compressed in 25F/S (PAL) or 30F/S (NTSC) CIF resolutions independently. Support both variable bit rate and variable frame rate.
- Compressed video and audio are synchronous. You can select either mixed stream or only video stream.
- Support 4CIF, DCIF, 2CIF, CIF and QCIF resolution.
- Support multi-area motion detection.
- Support OSD and changeable OSD position of the date and time.
- Support LOGO and changeable LOGO position.
- Support SD card local record, up to 64GB.

## 1.2 Network

- Support TCP, UDP, RTP, Multicast for network preview.
- Multi-level user management leads to high system safety. Up to 16 users.
- Support PPPoE for broadband dialup.
- Support PSTN for narrow band dialup.
- Support dynamic DNS (DDNS)
- Support Email AlarmNotification
- Support remote parameters setup.
- Alarm information can be sent to remote center.
- Support one RS-485 interface that can be used to control pan-tilt-zoom and translucent channel input. Network control PTZ, preset, sequence and tour. Support many kinds of PTZ protocol
- Network record the real time stream.
- Network download and playback the recorded files.
- Remote upgrade the firmware.
- Support bi-direction voice talk or one-way voice broadcast.
- Support IE, Hybrid DVR server and Live Center to preview and record.

### 1.3 IP Camera Specification

#### INC-TS/TE Series IP Camera Model Description

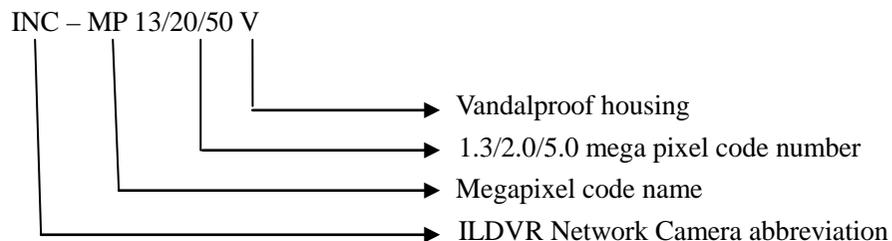


#### IP Camera Specification

Model	INC-TS38NH	INC-TS288NI	INC-TE288NI
Image Sensor	1/3" Sony Super HAD CCD		1/3" Sony EXview HAD CCD
Resolution	0.4Mega Pixels / 420 TVL	0.4Mega Pixels / 480 TVL	
Minimum Illumination	0.5 LUX	0.01 LUX	0.001 LUX
White Balance	AUTO	ATW / MWB	
B. L. C. Function	ON / OFF Optional		
Auto Iris	Video / DC		
Video Compression	H.264 (Hardware support)		
Compression Resolution	D1 (4CIF), 2CIF, DCIF, CIF, QCIF		
Frame Rate	1/16 to 25 fps (PAL) or 1/16 to 30 fps (NTSC)		
Bit Rate	32Kbps to 2Mbps		
Audio Compression	OggVorbis Standard, 16kbps		
Stream Type	Video & Audio / Video		
Dual Stream	Support		
Audio in	1 Channel (2.0 to 2.4Vp-p, 1kΩ)		
Audio out	1 Channel (Line Level, 600Ω)		
Video Out	1 Channel analog video		

<b>Alarm In (Data In)</b>	1 port	
<b>Relay out</b>	1 port	
<b>Network port</b>	1 RJ45 10M / 100M Auto-Negotiation	
<b>RS485 port</b>	1 port	
<b>SD Card slot</b>	1 port	
<b>Power Supply</b>	DC 12V(±20%) / 350mA	
<b>Operation Humidity</b>	10% ~ 90%	
<b>Operation Temperature</b>	-10°C ~ 50°C	
<b>Dimension</b>	100mm x 70mm x 60mm	
<b>Weight</b>	400g	450g

### INC-MP Series Megapixel IP Camera Model Description



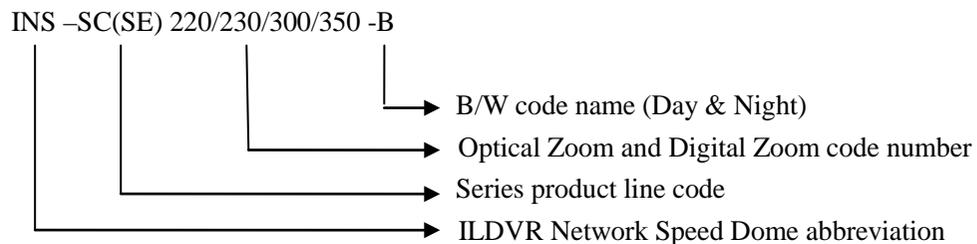
### IP Camera Specification

<b>Model</b>	<b>INC-MP13CD</b>	<b>INC-MP20CD</b>	<b>INC-MP20A/20V</b>	<b>INC-MP50N/MP50V</b>
<b>Image Sensor</b>	1/3" Sony Progressive scan CCD	1/1.8" Sony Progressive scan CCD	1/3" Progressive scan CMOS	1/2.5" Progressive scan CMOS
<b>Resolution</b>	1280*960	1600*1200	1600*1200	2560*1920
<b>Minimum Illumination</b>	Color: 0.1Lux @ F1.2 / B/W 0.01 Lux	Color: 0.5Lux @ F1.2 / B/W 0.05 Lux	Color: 0.5Lux @ F1.2 / B/W 0.05 Lux	Color: 0.5Lux @ F1.2 / B/W 0.05 Lux
<b>Frame Rate</b>	15fps(1280 × 960), 25fps	12fps (1600 × 1200), 25fps	15fps (1600 × 1200), 25fps (1280 × 960)	12fps (2560 × 1920), 25fps

	(1280 × 720)	(1280 × 720)	720)	(1280 × 720)
<b>Bit Rate</b>	32Kbps to 8Mbps adjustable. Max. 8Mbps	32Kbps to 16Mbps adjustable. Max. 16Mbps	32Kbps to 8Mbps adjustable. Max. 8Mbps	32Kbps to 16Mbps adjustable. Max. 16Mbps
<b>Auto Iris</b>	Video / DC	Video / DC	No	Video / DC
<b>Video Compression</b>	H.264 (Hardware support)			
<b>Audio Compression</b>	OggVorbis Standard, 16kbps			
<b>Stream Type</b>	Video & Audio / Video			
<b>Dual Stream</b>	Support			
<b>Audio in</b>	1 Channel (2.0 to 2.4Vp-p, 1kΩ)			
<b>Audio out</b>	1 Channel (Line Level, 600Ω)			
<b>Video Out</b>	1 Channel analog video			
<b>Alarm In (Data In)</b>	1	4	1	4
<b>Relay out</b>	1	3	1	3
<b>Network port</b>	1 RJ45 10M / 100M Auto-Negotiation			
<b>RS485 port</b>	1 port			
<b>SD Card slot</b>	1 port			
<b>Power Supply</b>	AC24V / DC12V / PoE	DC12V / PoE	AC24V / DC12V / PoE	DC12V / PoE
<b>Operation Humidity</b>	10% ~ 90%			
<b>Operation Temperature</b>	-10°C ~ 50°C			
<b>Dimension</b>	145mm x 66mm x 57mm	155mm x 78mm x 68mm	145mm x 66mm x 57mm	155mm x 78mm x 68mm
<b>Weight</b>	450g	980g	450g	980g

## 1.4 IP Speed Dome Specification

### IP Speed Dome Model Description



### IP Speed Dome Specification

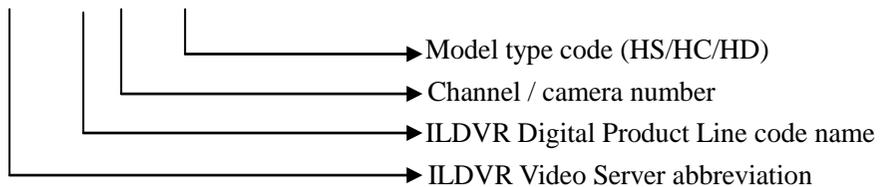
Model	INS-220	INS-230B	INS-300B	INS-350B
<b>Image Sensor</b>	1/4" Sony CCD			
<b>Resolution</b>	0.4Mega Pixels / 480 TVL	0.4Mega Pixels / 540 TVL	0.4Mega Pixels / 480 TVL	
<b>Digital Zoom Ratio</b>	F 3.9~85.8mm 22X Optical Zoom 10X Digital Zoom	F 3.6~82.8mm 23X Optical Zoom 10X Digital Zoom	F 3.4~102mm 30X Optical Zoom 12X Digital Zoom	F 3.4~119mm 35X Optical Zoom 12X Digital Zoom
<b>Minimum Illumination</b>	1.0 LUX	0.01 LUX		
<b>Sync System</b>	Internal			
<b>White Balance</b>	Auto/Manual			
<b>Aperture</b>	Auto/Manual			
<b>Focal</b>	Auto/Manual			
<b>Video Compression</b>	H.264 (Hardware support)			
<b>Compression Resolution</b>	D1 (4CIF), 2CIF, DCIF, CIF, QCIF			
<b>Frame Rate</b>	1/16 to 25 fps (PAL) or 1/16 to 30 fps (NTSC)			
<b>Bit Rate</b>	32Kbps to 2Mbps			
<b>Audio Compression</b>	OggVorbis Standard, 16kbps			
<b>Stream Type</b>	Video & Audio / Video			
<b>Dual Stream</b>	Support			
<b>Alarm In (Data In)</b>	4 port			
<b>Relay out</b>	1 port			

<b>Network port</b>	1 RJ45 10M / 100M Auto-Negotiation
<b>Horizontal Scan Range</b>	360° continuous
<b>Vertical Scan Range</b>	90° (180° auto-flip)
<b>Pan Speed</b>	0.8°~300°/s
<b>Tilt Speed</b>	0.8°~120°/s
<b>Preset Targets</b>	128
<b>Video Out</b>	BNC 1.0Vp-p / 75ohm
<b>Installation</b>	Indoor / Outdoor
<b>Fan and Heater</b>	Fan & heater auto-start
<b>Operation Temperature</b>	-35°C~+55°C
<b>Operation Humidity</b>	10-85% without agglomeration
<b>Power Supply</b>	AC24V /1.7A
<b>Weight</b>	2.0 Kg (without outdoor housing)

## 1.5 IP Video Server Specification

### IP Video Server Model Description

IVS – 5 0 0 x H X



### IP Video Server Specification

Model	IVS-5001HS	IVS-5002HC	IVS-5004HC	IVS-5001HD	IVS-5002HD
Video Input	1	2	4	1	2
Audio Input	1	2	4	1	2
Audio Output	1 Ch (Linear Electrical Level, 600Ω)				
Video Out	1 Channel analog video	N/A			
Audio Intercom	N/A	1 Channel (2Vp-p, 1kΩ)			
Video Format	PAL / NTSC				
Video Compression	H.264 (Hardware support)				
Compression Resolution	D1 (4CIF), 2CIF, DCIF, CIF, QCIF	CIF, QCIF		D1 (4CIF), 2CIF, DCIF, CIF, QCIF	
Frame Rate	1/16 to 25 fps (PAL) or 1/16 to 30 fps (NTSC)				
Bit Rate	32Kbps to 2Mbps				
Audio Compression	OggVorbis Standard, 16kbps				
Stream Type	Video & Audio / Video				
Dual Stream	Support				
Alarm In (Data In)	1 port	4		2	
Relay out	1 port	2		1	
Network port	1 RJ45 10M / 100M Auto-Negotiation				
RS485 port	1 port				
RS232 port	N/A	1			
Power Supply	DC 12V / 250mA	DC 12V / 600mA			
Operation Humidity	10% ~ 90%				
Operation Temperature	-10°C ~ 50°C				
Dimension	81mm x 91mm x 41mm	202mm x 137mm x 43mm			
Weight	320g	1500g			

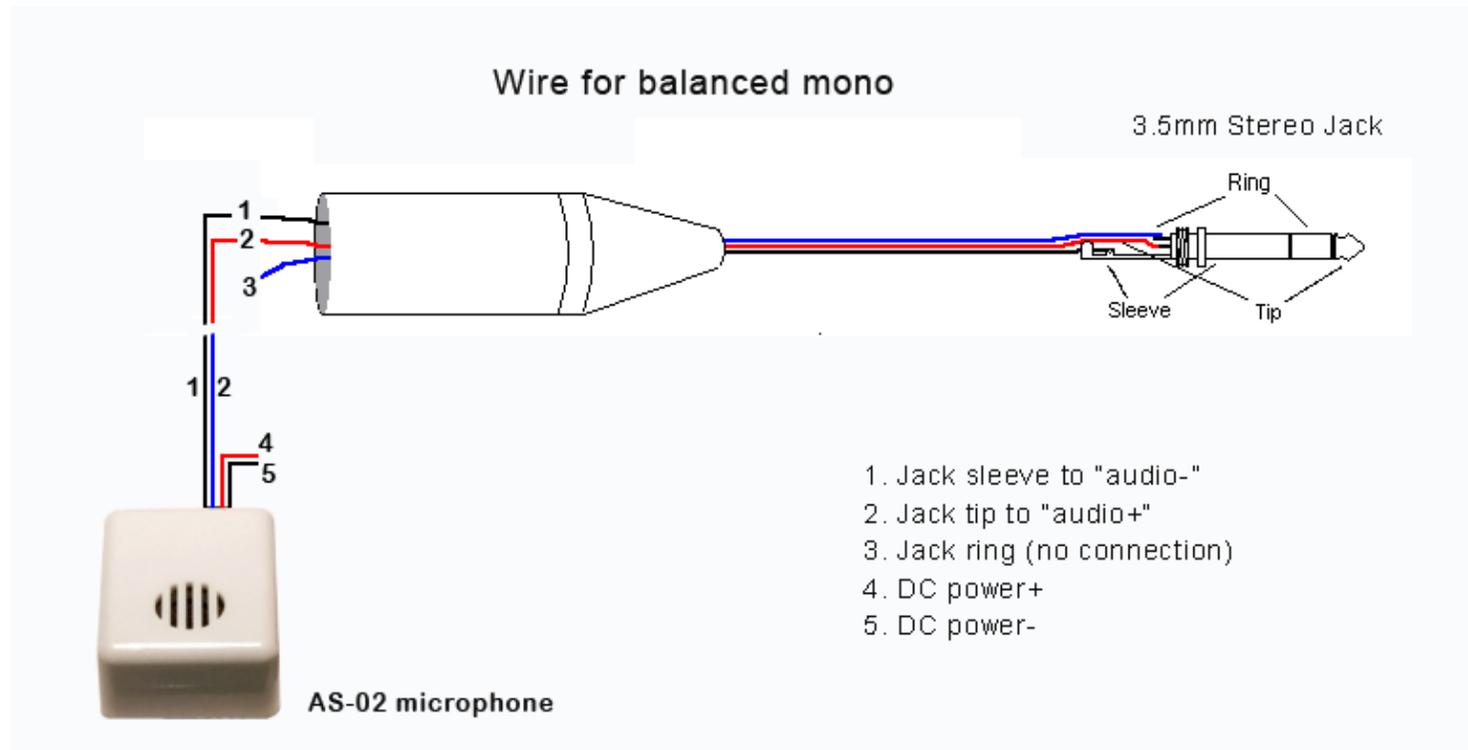
## 2 Installation

### 2.1 Before Installation

- After Opening the packing box, please check carefully to confirm that the goods in it are consistent with list
- Please read user's manual carefully before installation
- Please power-off all related equipments before installation
- Please check the voltage of power supply to avoid voltage mismatch
- Installation environmental: Do not use it under humidity and high temperature, to keep ventilation to vent freely, avoid to setup in the vibration surroundings.

## 2.2 Prepare Audio Connector

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



## 2.3 IP Camera Install



INC-MP13/MP20 Rear



INC-MP20CD/MP50 Rear



Item	Name	Description
1	Lens Mount	CS-mount lens
2	Back Focus Lock Screw	After adjusting the CS ring, turn this screw with a screw driver to lock the back focus.
3	DIP Switch	Camera function switches, see next page.
4	B&R Color Adjustment	In MWB mode, press button to adjust blue or red color
5	Power LED	Side LED power on indicates CCD module working status. Rear LED power on indicates network module working status.
6	Lens connector and Iris level adjustment	When using DC servo lens, slowly turn the LEVEL potentiometer until the picture appears to be perfect
7	Power Connector	DC 12V power connector
8	RJ 45 Connector	Network Connector
9	Audio in & Audio out Connector	Microphone and Speaker connector
10	SD Card Slot	Up to 64GB SDHC SD card
11	Video Out	Output analog video
12	RS485 Connector	Connect to PTZ RS485 port
13	Alarm In Connector	Switch-type signal input
14	Alarm Out Connector	Switch-type signal output
16	Tripod Adapter	The tripod adapter can be attached to either the top or the bottom of the camera housing

#### Installation tips:

If you are looking at network video to adjust the focus of IP camera's lens, due to the network delay, it is difficult to get perfect picture quality. Please use an analog monitor to connect the Analog Video Out (Port 11) then get around the video delay.

## DIP Switch



**TE288 / TS288**



**TS38**

Items	Name	Description
1	IR	Set IR cut for the cameras model name ending with NI, for example “TE288NI”
2	INT	Set Internal Synchronize as default
3	L.L.	Line Lock (not available)
4	AI	Set Auto Iris mode when using automatic lens
5	AES	Set Auto Electric Shutter mode when using manual lens
6	D&N	Turn on Day & night function
7	ATW	Set Auto Trace White Balance mode
8	MWB	Set Manual White Balance mode
9	Turbo AGC	Set Auto Gain Control mode

## 2.4 IP Speed Dome Install

### 2.4.1 Setup PTZ Protocol and Default Baud Rate

For your attention, your IP speed dome hardware jumper switch settings of PTZ protocol, Baud Rate and Address must be matching the PTZ tab configuration of **IP Camera Setup** in Hybrid Server program and Live Center program, see next picture or refer to Mnuual-1 and Manual-4 for more information.

IP Camera Setup

System Channel **PTZ** Sensor Motion

Camera No.  Copy to

Baudrate  PTZ Protocol  PTZ Address



PTZ Speed

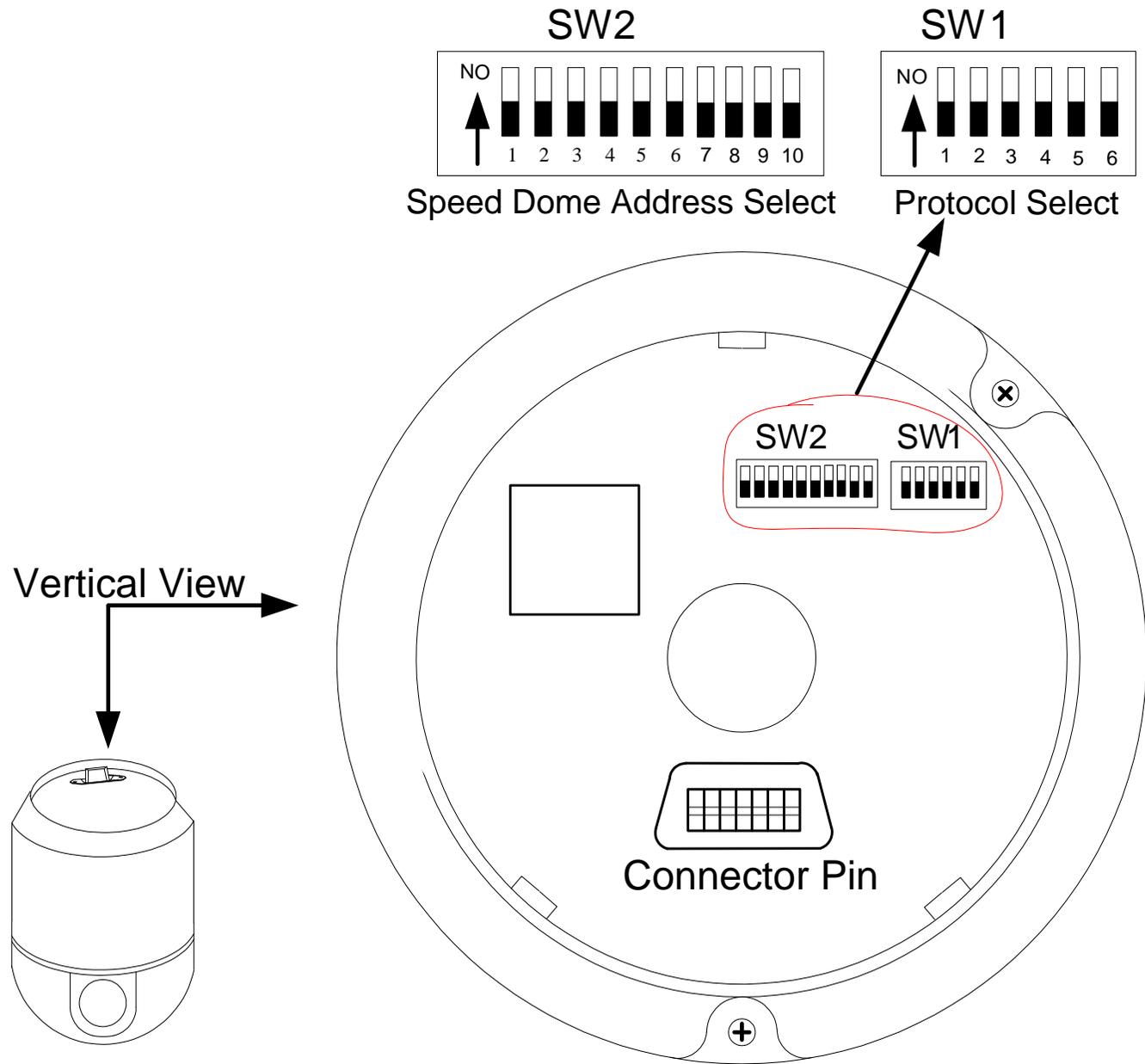
Preset Setup

Name  Preset

Mode

Preset Name	No.	Mode
Nextdoor	1	Call
Parking	2	Call
Highway	3	Call

Home Position



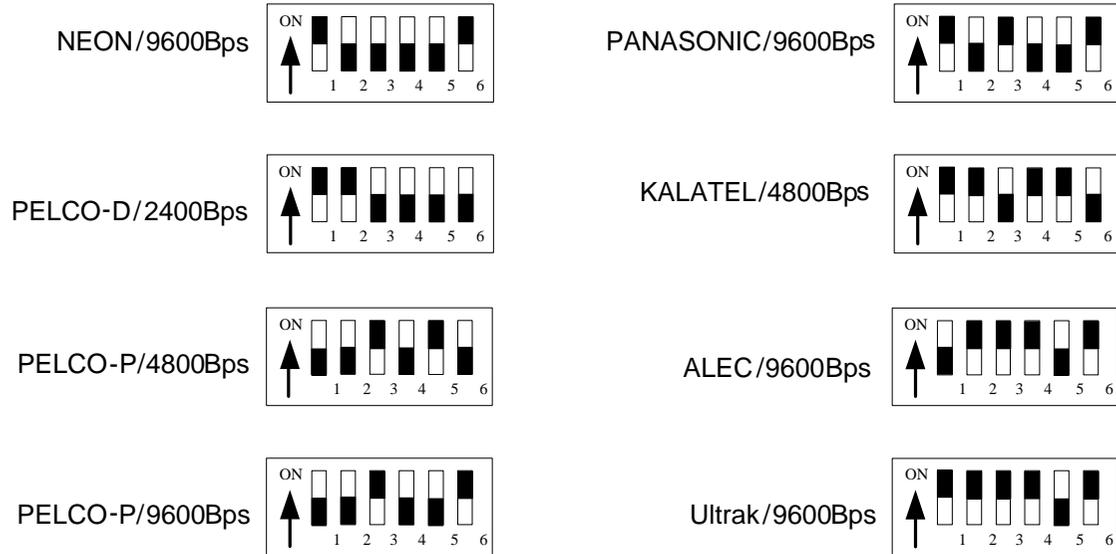
As shown in above figure, SW1 is used to set PTZ protocol of communication and the baud rate. DIP-1 to DIP-4 of SW1 is used to set protocol. Up to 16 protocols can be chosen according your system capacity. The following table shows DIP switch settings for each protocol. The default PTZ Protocol is PELCO-D. You usually don't need change this setting.

Protocols	DIP status				Normal Baud Rate	
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
SAMSUNG	ON	OFF	OFF	OFF	OFF	ON
B01	ON	OFF	OFF	OFF	OFF	ON
NEON	ON	OFF	OFF	OFF	OFF	ON
SANTACHI	OFF	ON	OFF	OFF	OFF	ON
PELCO-D	ON	ON	OFF	OFF	OFF	OFF
PELCO-P/4800	OFF	OFF	ON	OFF	ON	OFF
PELCO-P/9600					OFF	ON
PANASONIC	ON	OFF	ON	OFF	OFF	ON
LONGCOMITY	OFF	ON	ON	OFF	OFF	ON
HUNDA600	ON	ON	ON	OFF	OFF	ON
LILIN	OFF	OFF	OFF	ON	OFF	ON
VICON	ON	OFF	OFF	ON	ON	OFF
MOLYNX	OFF	ON	OFF	ON	OFF	ON
KALATEL	ON	ON	OFF	ON	ON	OFF
VCL	OFF	OFF	ON	ON	OFF	ON
Reserved	ON	OFF	ON	ON	OFF	ON
ALEC	OFF	ON	ON	ON	OFF	ON
ULTRAK	ON	ON	ON	ON	OFF	ON

DIP-5 and DIP-6 of SW1 are used to set the baud rate. Up to 4 different baud rates can be set.

Baud Rate of Communication	Setup of Baud Rate					
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6
2400 bps					OFF	OFF
4800 bps					ON	OFF
9600 bps					OFF	ON
19200 bps					ON	ON

Here are some examples of DIP switch SW1:



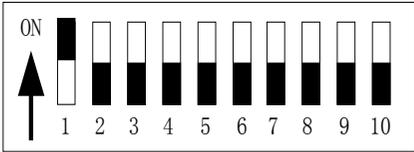
### 2.4.2 Setup PTZ Address

As shown in above figure, SW2 is used to set address of IP dome camera from 1 – 1023. The jumper switches from DIP-10 to DIP-1 are equivalent to a 10-bit binary

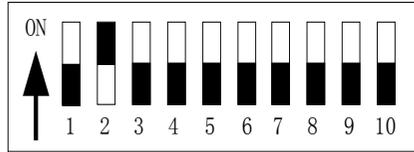
digital. DIP-10 is MSB while DIP-1 is LSB. The state “ON” of each bit means 1 while “OFF” means 0. Following table shows DIP switch settings for some addresses. The default PTZ address is #1. You usually don’t need change this setting.

Dome Address	DIP Switch Settings									
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6	DIP-7	DIP-8	DIP-9	DIP-10
1	ON	OFF								
2	OFF	ON	OFF							
3	ON	ON	OFF							
4	OFF	OFF	ON	OFF						
5	ON	OFF	ON	OFF						
6	OFF	ON	ON	OFF	OFF	OFF	OFF		OFF	OFF
7	ON	ON	ON	OFF						
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
...	...	...	...	...	...	...	...	...	...	...
1023	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

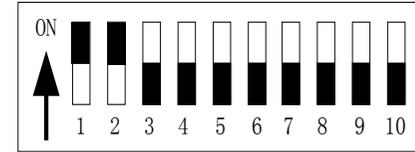
Here are some examples of DIP switch SW2:



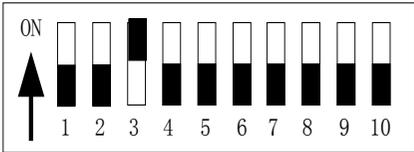
Speed Dome Address=1



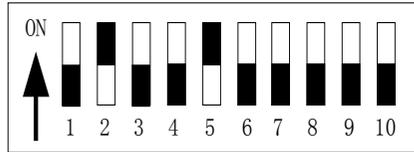
Speed Dome Address=2



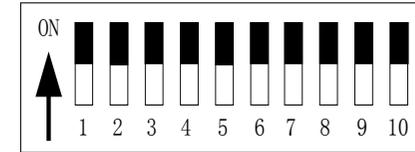
Speed Dome Address=3



Speed Dome Address=4



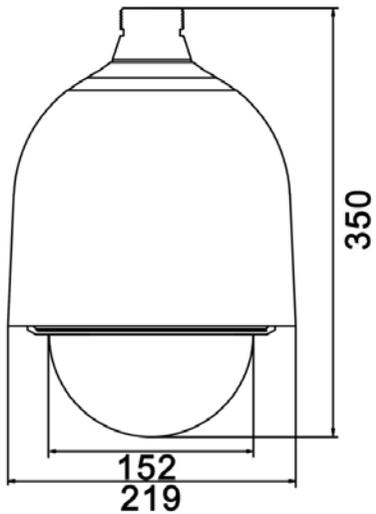
Speed Dome Address=18



Speed Dome Address=1023

### 2.4.3 Dimension of Product

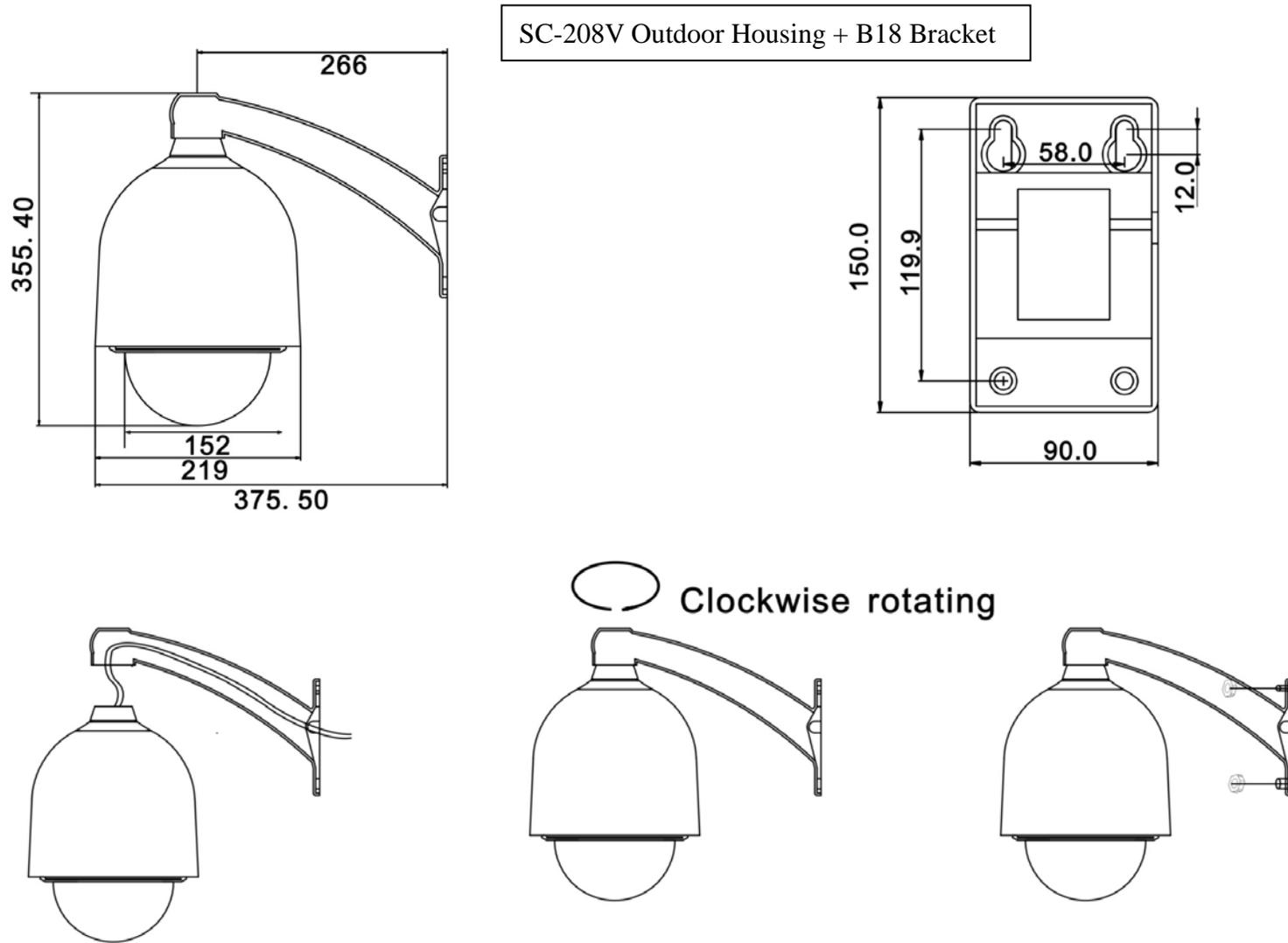
The measure unit in following illustration figures is by millimeter, for example, 350 means 350 mm.



SC-208V Outdoor Housing

#### 2.4.4 Outdoor Wall Mount

You need SC-208V Outdoor Housing and B18 Bracket to complete the Wall Mount installation. Please complete waterproof processing when install the speed dome housing.



Installation Steps (take wall mounting as example)

- Unpack the carton and carefully take out the dome camera and its attachments.
- Bring through and take out system cables from the bracket
- Fix the housing on the bracket and rotate clockwise until it is firmly fixed
- Drill 4 holes on the wall according the measure size of bracket
- Fix the bracket on the wall

### Other adapters suitable for B18 Bracket



B20 Pole Mount Adapter



B21 Outside Corner Adapter



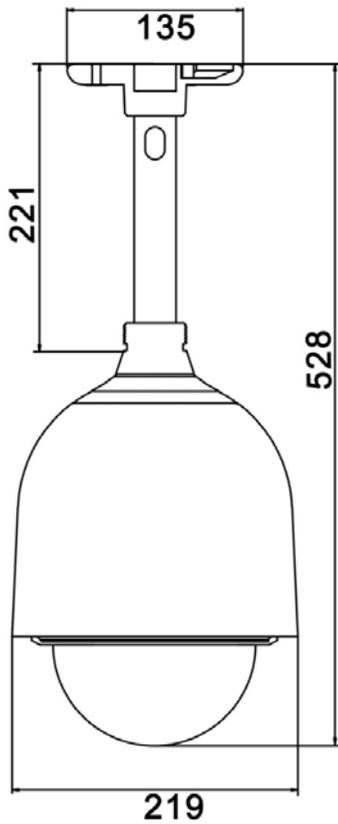
B22 Pole Mount Adapter



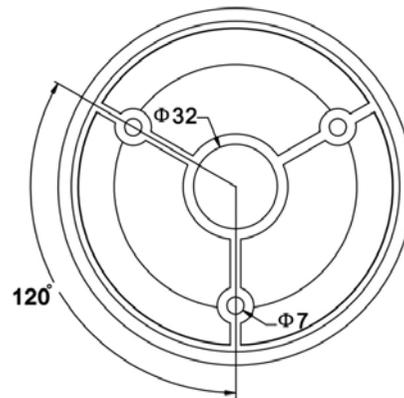
### 2.4.5 Outdoor pendant Mount

You need SC-208V Outdoor Housing and B23 Bracket (10cm length) or B24 Bracket (30cm length) to complete the Pendant Mount installation. We offer customized service for any length of bracket to meet your project requirement. Please contact your dealer for more information.

Please complete waterproof processing when install the speed dome housing.



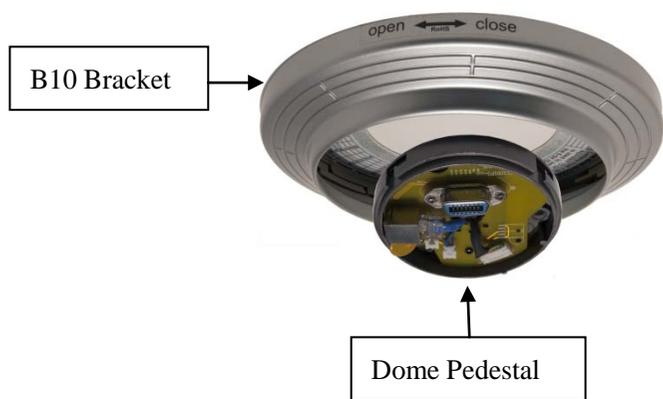
SC-208V outdoor housing + B23 bracket



#### 2.4.6 Indoor Drop Ceiling Mount

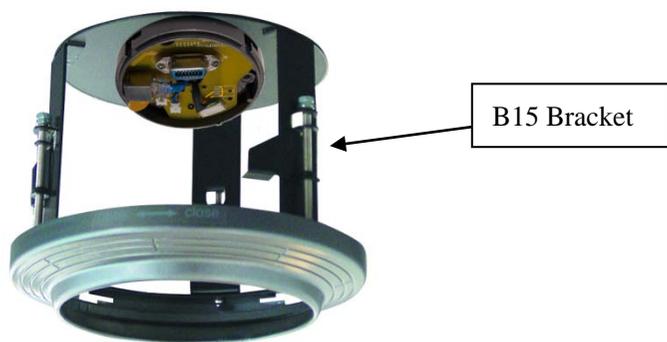
You need B10 Bracket and the dome pedestal to complete the Drop Ceiling Mount installation.

For your attention, the dome body of indoor package is different from the dome body of outdoor package. The aluminum dome body for indoor is designed as intact cylinder and came with a vitreous cover. The aluminum dome body for outdoor is designed as cooling cylinder and came without a vitreous cover.



#### 2.4.7 Indoor Recess Mount

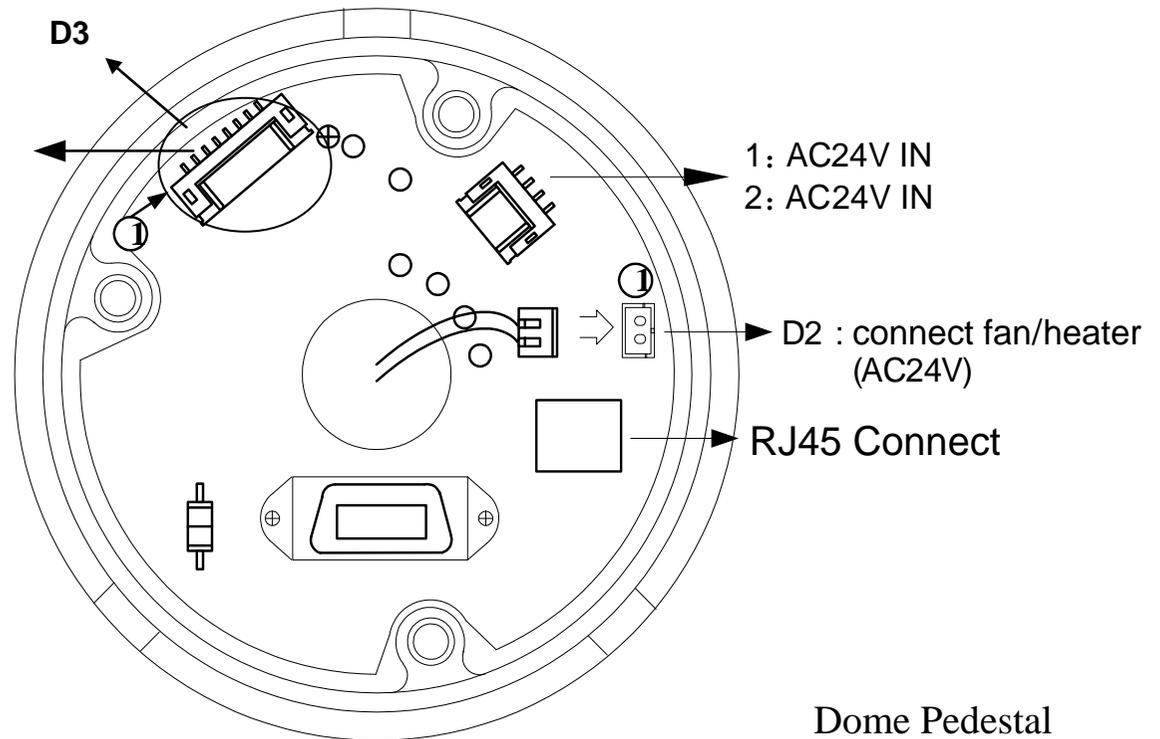
You need B15 Bracket and the dome pedestal to complete the Indoor Recess Mount installation.

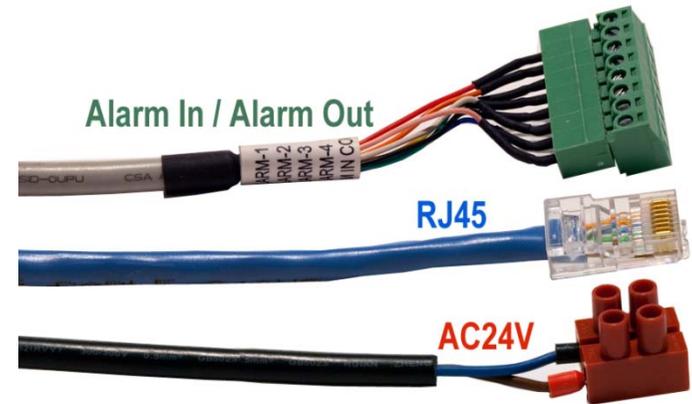
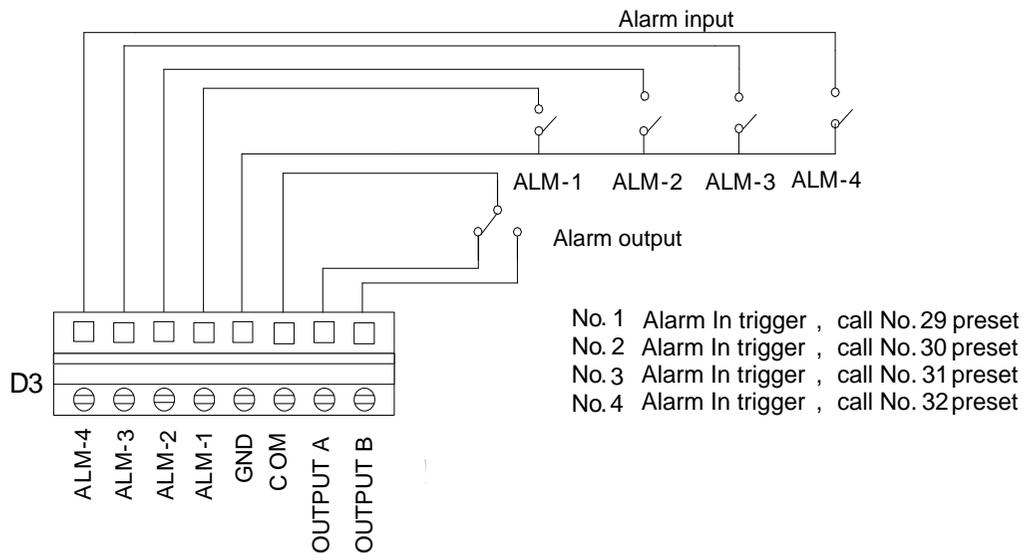


## 2.4.8 Alarm In and Alarm Out Port

For your attention, Alarm Input signal type must be Switch-type signal, any other input signal might damage IP Speed Dome. The built-in alarm system of IP Speed Dome only triggers PTZ Presets No. 29 to No. 32. It has no relationship with alarm-in/alarm-out of DVR system. When multiple alarm-in trigger, speed dome will respond one by one in sequence of two seconds interval. Once the IP speed dome has alarm-in trigger, it will not respond to other operation such as “Scanning”, “Tour”, “Remember Tracking” etc.

ALM4 : Channel 4 collector alarm input : 1  
ALM3 : Channel 3 collector alarm input : 2  
ALM2 : Channel 2 collector alarm input : 3  
ALM1 : Channel 1 collector alarm input : 4  
GND : Common collector alarm input : 5  
COM : Common collector alarm output : 6  
OUTPUT : Alarm output A  
OUTPUT : Alarm output B





### 2.4.9 Overall Reviewing

Before you power on the IP speed dome camera, please do an overall reviewing. Otherwise please refer to following figure for troubleshooting.

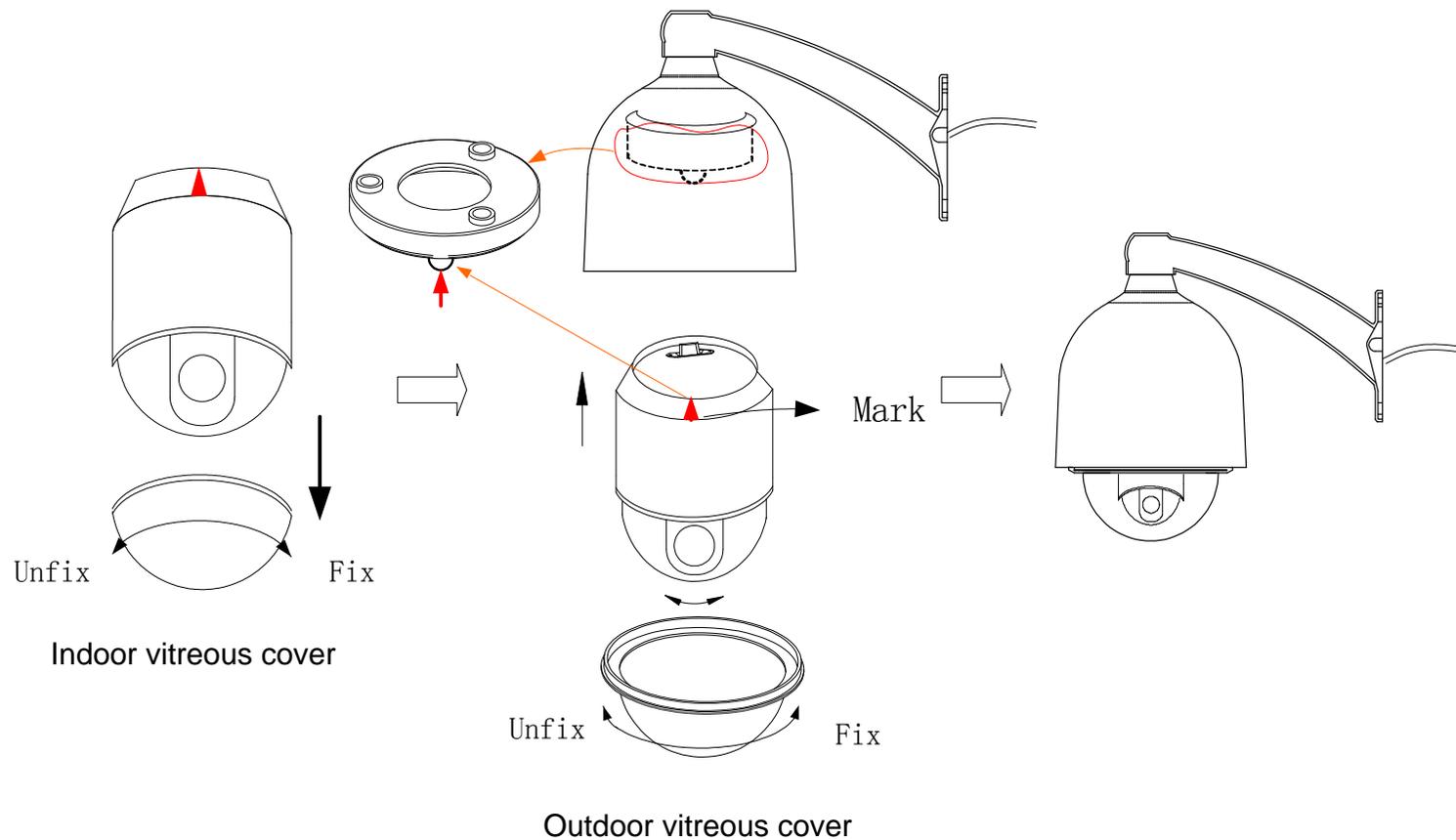
- Have you taken out all package protection materials under the indoor/outdoor vitreous cover?
- Have you taken out the indoor vitreous cover if you install outdoor housing? (Otherwise it will reduce the picture quality)
- Did you set up the dome and housing firmly?
- Are you sure the **Protocol**, **Address** and **Baud Rate** settings match your DVR program configuration?

Disassembling steps:

- Rotate the vitreous cover dome counterclockwise and take it out.
- Push the ball upward to the end and rotate counterclockwise until it is loose then take it out.

Assembling steps:

- Aim at the “MARK” on the ball at the notch on the pedestal, push the ball upward to the end and rotate clockwise until it is clicked.
- Mount the vitreous cover by rotating it clockwise at last.



## 2.5 IP Video Server Install

### 2.5.1 IP Server IVS-5001HS

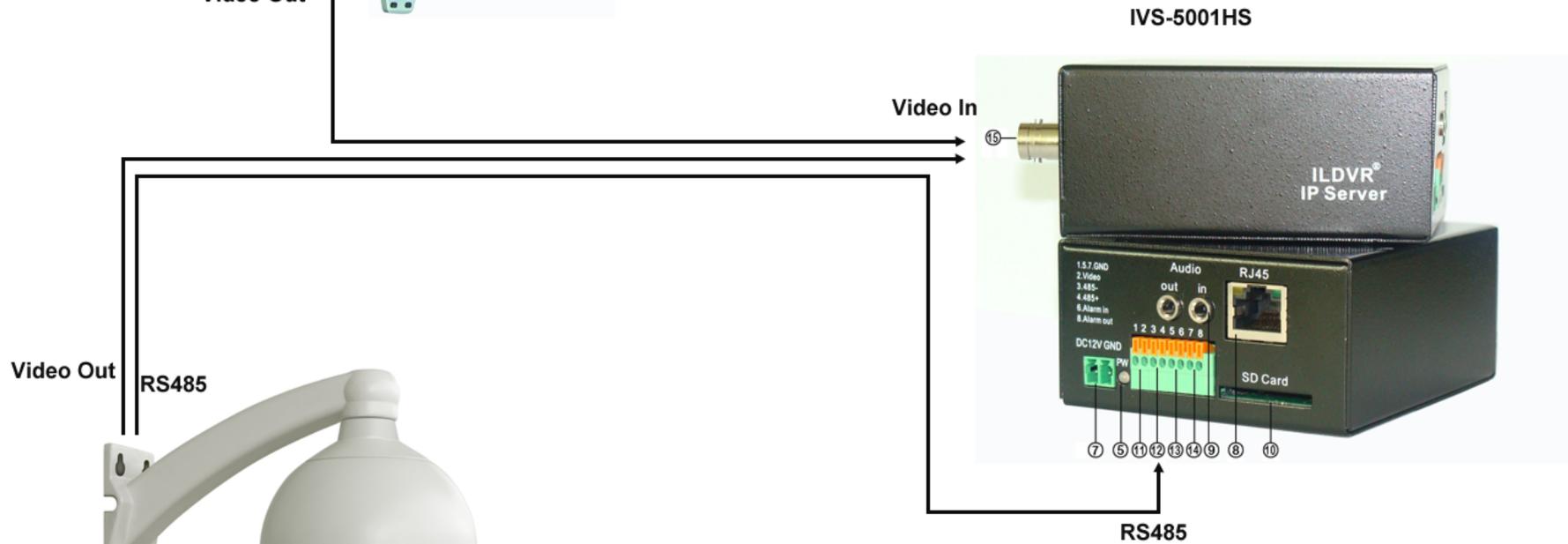
For your attention, if you connect analog speed dome to IVS-5001HS video server, please refer to above section 2.4 to set analog speed dome PTZ protocol=PECLO-D, Baud Rate=2400 and Address=1. The speed dome hardware jumper switch settings of PTZ protocol, Baud Rate and Address must be matching the PTZ tab configuration of **IP Camera Setup** in Hybrid Server program and Live Center program



Item	Name	Description
5	Power LED	LED power on indicates network module working status.
7	Power Connector	DC 12V power connector
8	RJ 45 Connector	Network Connector
9	Audio in & Audio out Connector	Microphone and Speaker connector
10	SD Card Slot	Up to 64GB SDHC SD card
11	Video Out	Output analog video
12	RS485 Connector	Connect to PTZ RS485 port
13	Alarm In Connector	Switch-type signal input
14	Alarm Out Connector	Switch-type signal output
15	BNC Connector	Analog Video In, connect to camera video out



1. Convert existing analog camera to an IP camera



2. Convert existing analog speed dome to an IP speed dome

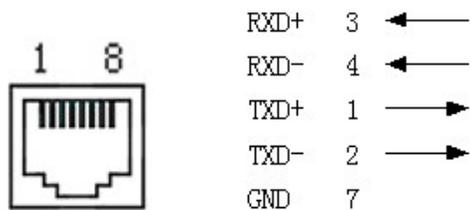
## 2.5.2 IP Server IVS-5000HC/HD Series



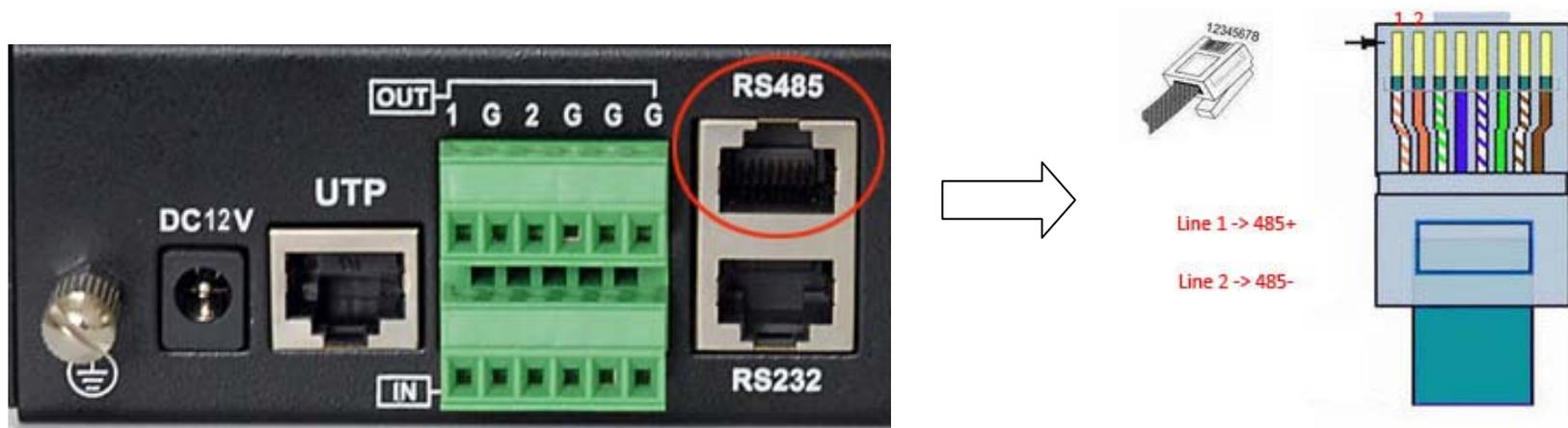
Item	Name	Description
1	Power LED	LED power on indicates server working status.
2	Link LED	LED power on indicates network working status
3	Tx/Rx data LED	LED power on indicates RS232/RS485 data transmit working status.
4	Power Connector	DC 12V power connector
5	UTP Connector	RJ 45 Network Connector
6	Alarm In Connector	4-port alarm input
7	Alarm Out Connector	2-port relay output

8	RS232 Connector	Standard RS-232 serial port RJ45 socket, connect to computer COM port for maintenance
9	RS485 Connector	Standard RS-485 serial port RJ45 socket. Connect to PTZ RS485 port
10	Audio In	4-BNC audio connector for audio recording
11	Video In	4-BNC video connector for video recording
12	Audio Line In	Microphone line in for Remote Chat (VoIP)
13	Audio out Connector	Speaker connector
14	GND Connector	Ground Connection

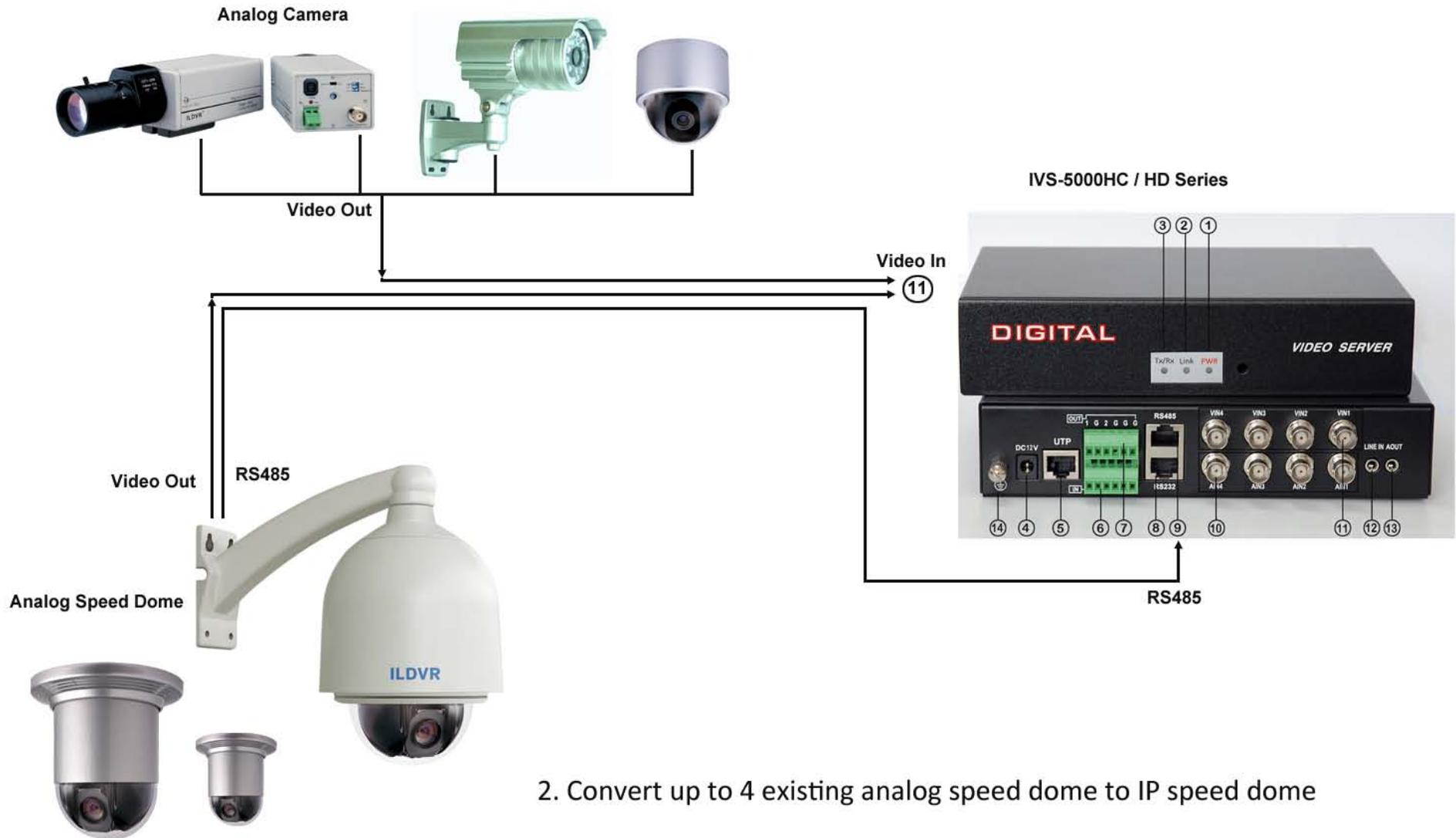
### The pin definition of RS-485 Serial interface



Please prepare one cable with a RJ45 connector, Line-1 connect to Analog speed dome RS485+ port and Line-2 connect to analog speed dome RS485- port.



1. Convert up to 4 existing analog cameras to IP cameras



2. Convert up to 4 existing analog speed dome to IP speed dome

For your attention, if you connect analog speed dome to IVS-5002HC/5004HC/5002HD video server, please refer to above section 2.4 to set the analog speed dome protocol=PECLO-D, Baud Rate=2400 and Address=1, 2, 3, 4 respectively. The speed dome hardware jumper switch settings of PTZ protocol, Baud Rate and Address must be matching the PTZ tab configuration of **IP Camera Setup** in Hybrid Server program and Live Center program

### 3 Network Operation

Every IP device has built-in web server, users can easily remote access it by Internet Explorer to perform remote preview, remote control PTZ, remote playback, remote setup and download archive video, etc. But IE web client is limited to point-to-point connection. That means you can connect only one IP device in one IE window. This kind of solution is not suitable for multiple sites surveillance system. ILDVR offers 2 higher levels of software solutions for complicated network surveillance system. Please refer to Live Center solution and CMS solution for more information.

#### 3.1 Reset IP address for new Network

Before you build up the IP surveillance system, please plan a network layout for your IP video device. Every IP device must be configured a static IP address. You have 2 ways to change the default factory IP address to your local network IP address.

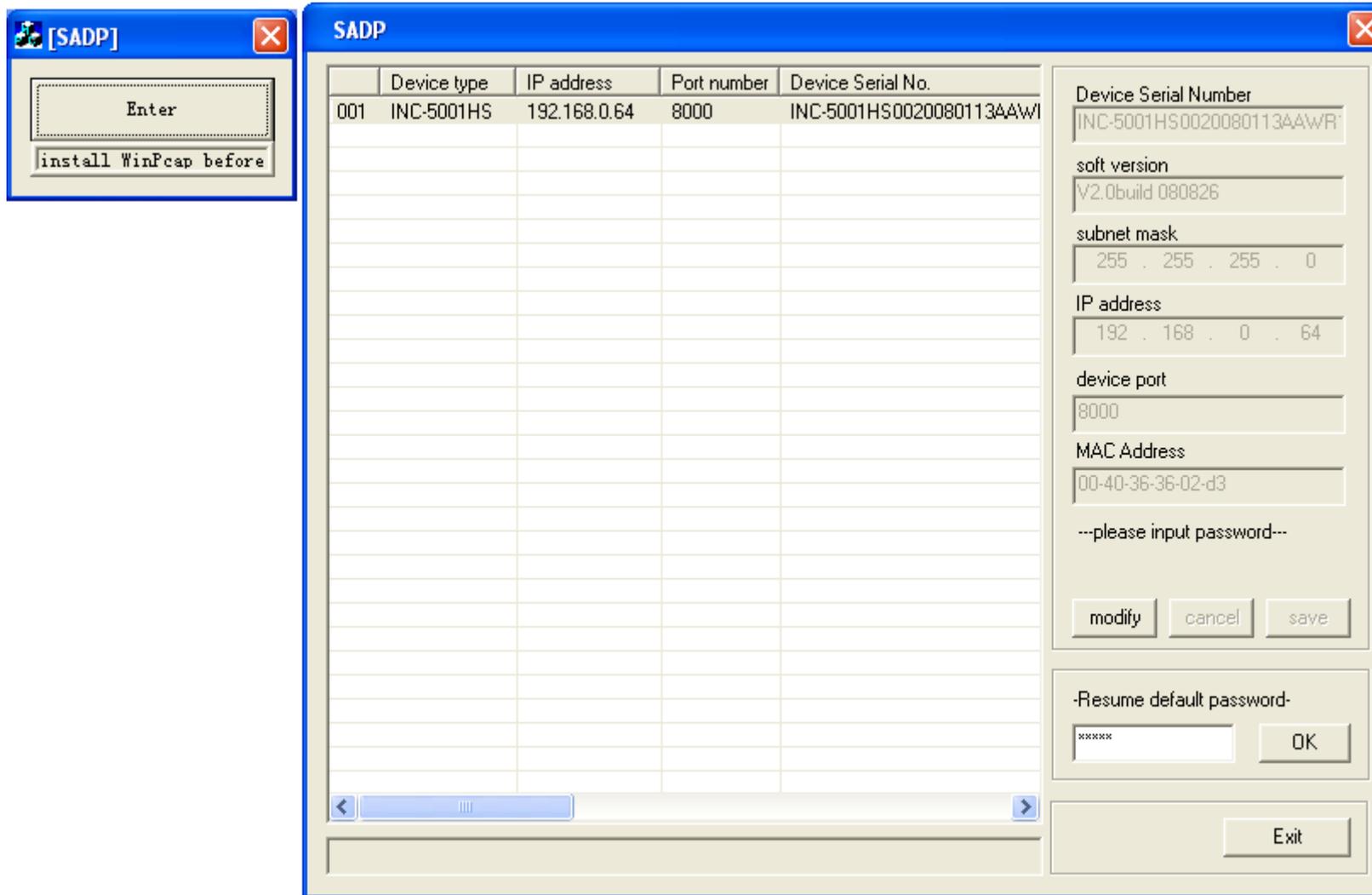
##### 3.1.1 Use IP Capture

If you don't know the original IP address of your IP device. Please choose **IP Capture** to do the job. To use **IP Capture** software to change IP address, you should install the IPCapture.exe program firstly. You can find this utility software in the sub-folder of Utilities of your software CD. After you finish installation, there is a shortcut icon "Sadp" on desktop, double click it to run the program.

##### Tips:

- If your computer OS is Windows Vista, please select "Run as administrator" from right-click menu to run "Sadp".
- Your IP device and the computer should be in same network segment.
- To modify the IP address you need "admin" user rights. If you forget the admin password, please refer to Appendix D to reset the IP device.

In "SADP" interface, click an IP device from left table. This IP address information will show in right table. Click "modify" button to highlight the input box then input new IP information. After finish, click "save" button. See the picture in next page



### 3.1.2 Use IE to change IP

If you already get acknowledge the original IP address of your IP device, please go ahead to login the IP device by Internet Explorer and go to **Remote Setup** page to change IP address, refer to section 3.2.3.

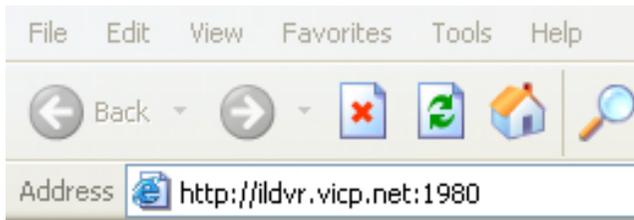
## 3.2 IE web client operation

### 3.2.1 Log in

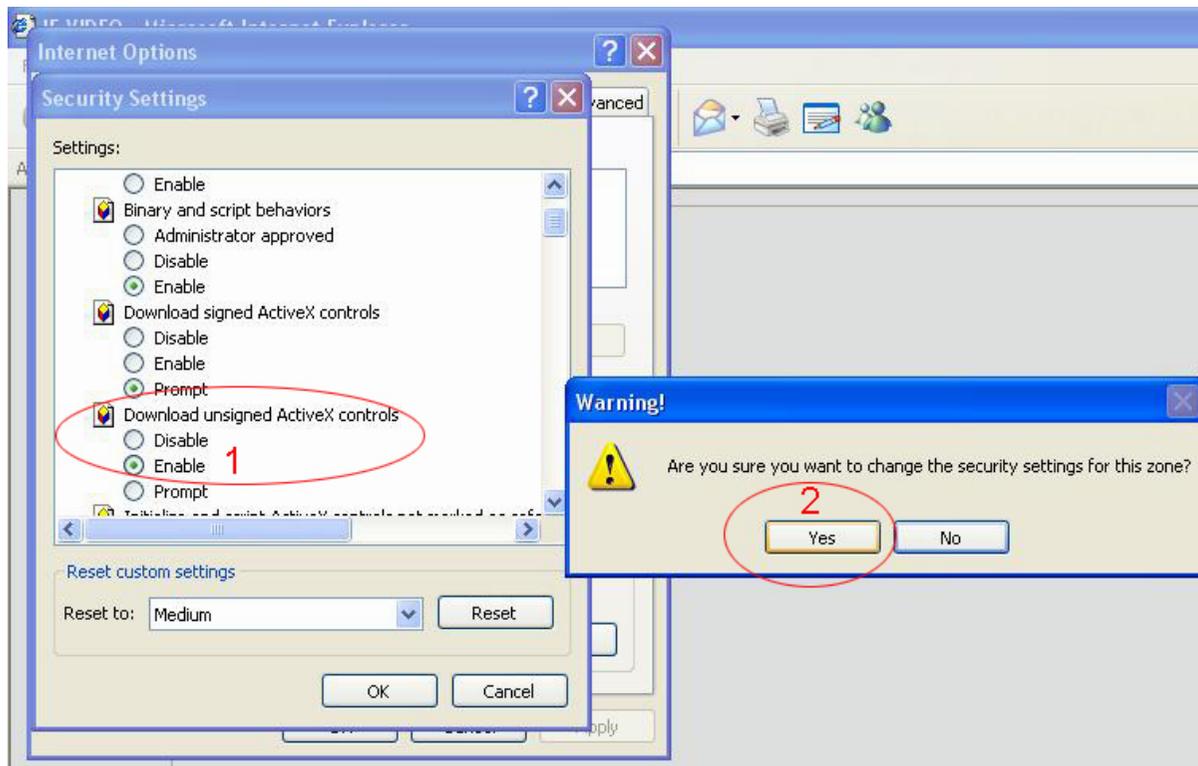
Run **Internet Explorer** and input the IP address in the IE address box. Press “**Enter**” and a security warning will appear after connecting with the DVR server. This warning is the Active X control that needs to be downloaded in order to use this feature. Click “**Yes**” to continue.



If you have correctly configured the IP Device with DNS/DDNS, you can also input the IP device’s domain name and web listening port in the IE address box.



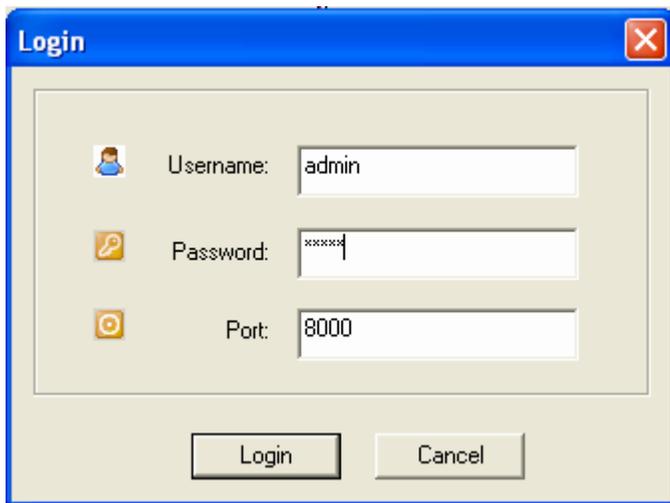
**Windows XP/VISTA security settings prevent users from installing unsigned ActiveX controls. You must turn off Windows firewall and change IE security settings to enable “Download of unsigned ActiveX controls”. After it’s done installing the ILDVR web client, please restore your IE security setting back to its original settings. See the following 2 diagrams.**



When the following dialog interface appears, click OK button to install ActiveX controls.



After finish installation of ActiveX controls, the following web client login interface will appear. Input correct User name, Password and TCP port. Click "Login" button.



**For your attention**  
Different generations of products may have different interface but most of parameters and their meanings are consistent.

### 3.2.2 Remote Live Viewing



Main interface

## Control Buttons



All channels connect button.



All channels disconnect button



Capture image button



Manual record button, the video save in local disk, default save directory is D:\webrecord\. To play the saved video, you must use the utility Player.exe



No record button.



Start remote talk button.



Stop remote talk button



Logout button



Login button



Live viewing button



Remote playback button



Remote setup button



Remote log search button



Split mode shift button



PTZ control button, center is auto.



Preset control button, input preset number then click button



to call it. Click button



to save it.



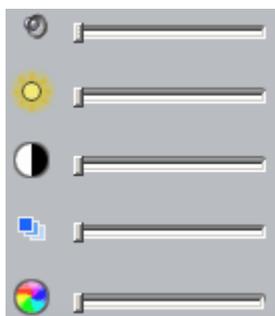
Wiper on/off button



Light on/off button



Lens control button



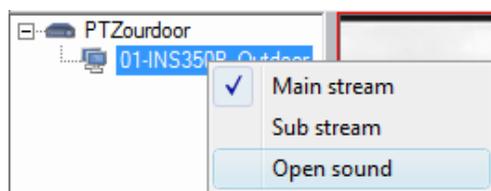
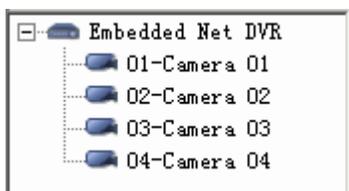
From up to down, adjust voice volume, brightness, contrast, tone and saturation.



Click it to restore default



Display computer CPU info, date & time and login ID information.



Display video server device name and channel connection information. You can double click the channel icon to get connection  
From Right-click menu, select main-stream or sub-stream, open audio spy.

#### Connecting operation steps:

- Click (select) one blank window that you want view remote video
- Double click channel icon to display that camera.

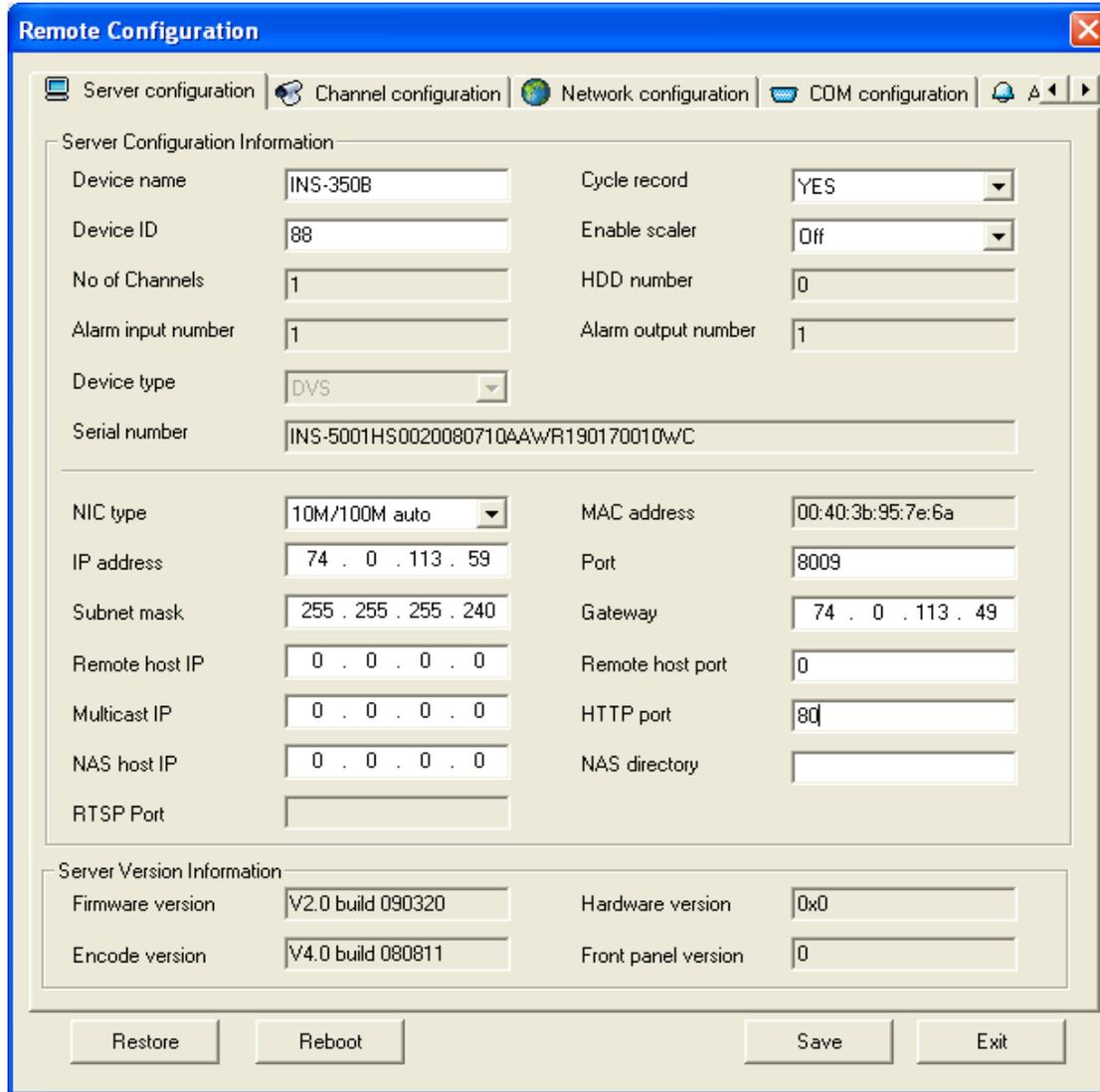
Or click button  to get all channels connecting.



Remote Live Preview

### 3.2.3 Remote Setup

In the web client main interface, click  button to enter Remote Setup interface. There are 7 pages in total. In these pages you can change system parameters, reboot IP Device, load default parameters, etc.



The screenshot shows the 'Remote Configuration' window with the following fields and values:

Server Configuration Information	
Device name	INS-350B
Device ID	88
No of Channels	1
Alarm input number	1
Device type	DVS
Serial number	INS-5001HS0020080710AAWR190170010WC
Cycle record	YES
Enable scaler	Off
HDD number	0
Alarm output number	1

Network Configuration	
NIC type	10M/100M auto
IP address	74 . 0 . 113 . 59
Subnet mask	255 . 255 . 255 . 240
Remote host IP	0 . 0 . 0 . 0
Multicast IP	0 . 0 . 0 . 0
NAS host IP	0 . 0 . 0 . 0
RTSP Port	
MAC address	00:40:3b:95:7e:6a
Port	8009
Gateway	74 . 0 . 113 . 49
Remote host port	0
HTTP port	80
NAS directory	

Server Version Information	
Firmware version	V2.0 build 090320
Hardware version	0x0
Encode version	V4.0 build 080811
Front panel version	0

Buttons: Restore, Reboot, Save, Exit

#### Server Configuration

From this page you can read IP device serial number to register license, check system firmware version for upgrade information. You can modify device name, device ID and network parameters.

Set “Cycle record” to “YES” will overwrite the SD card when it is full.

Set “Enable scaler” to “ON” will enable “Video Zoom In” function in network client software.

**Remote Configuration**

Server configuration | **Channel configuration** | Network configuration | CDM configuration

Channel configuration

Select channel: Channel01

Channel name: Camera 01 (Note: Channel name can not be copied)

Schedule    Setup    PreRec T.: 5 seconds    PostRec T.: 5 second

Motion Det.    Area setup    Schedule    Linkage (Note: Area can not be copied)

Display name    X.Loc: 512    Y.Loc: 416

Display OSD    X.Loc: 0    Y.Loc: 32     Display week

Properties: Opaque&Steady    Type: MM-DD-YYYY (MDY)

Type: Main stream    Frame type: BBP    I Frame: 30

Ima.Quality: Higher    Frame rate: Full Frame    Stream type: Video

Resolution: 4CIF    Bitrate type: Variable    Max bitrate: 768Kbps

Copy to: All channels    copy

Overlay text

	x	y	Overlay content
<input type="checkbox"/> Area 1	0	0	
<input type="checkbox"/> Area 2	0	0	
<input type="checkbox"/> Area 3	0	0	
<input type="checkbox"/> Area 4	0	0	

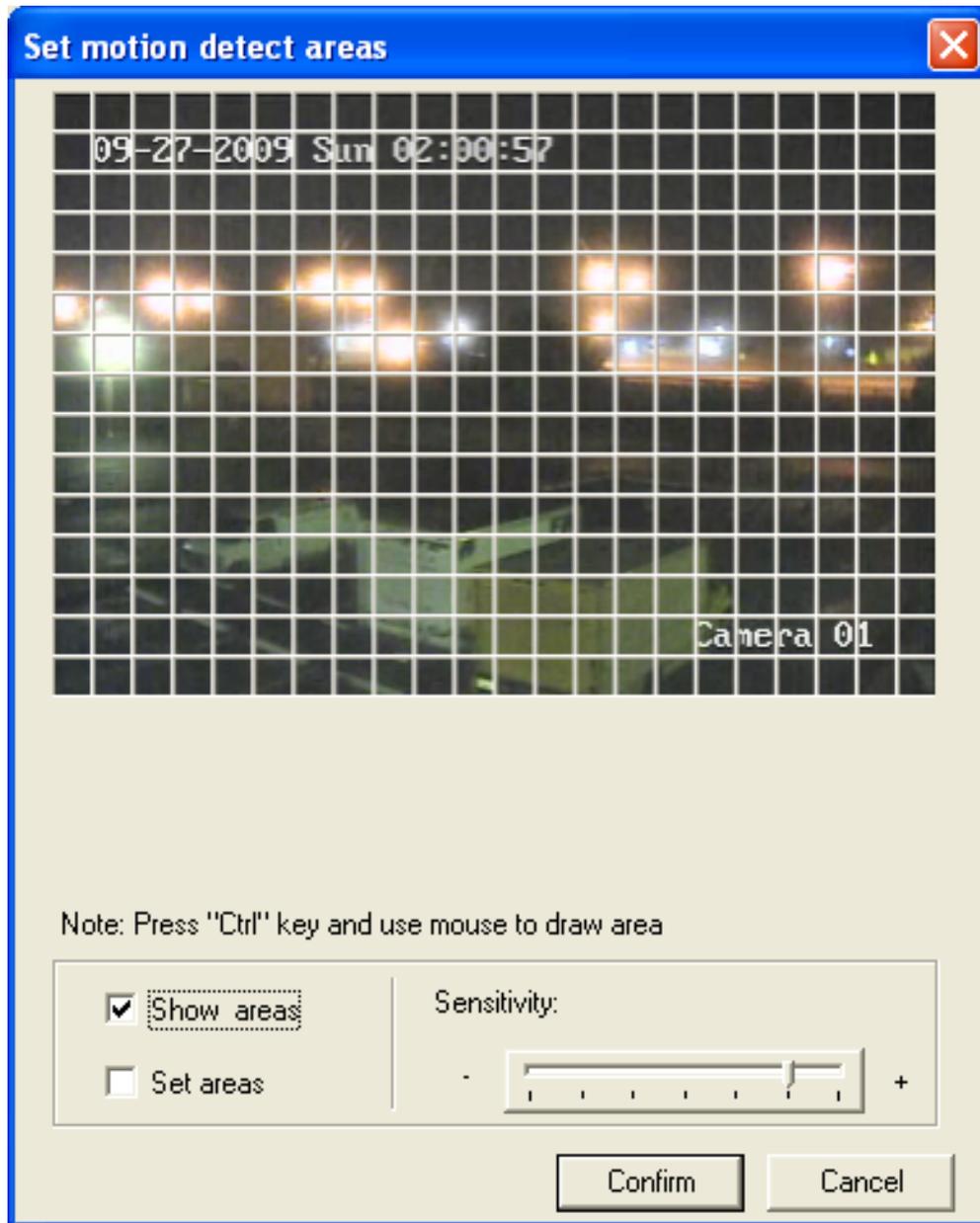
Restore    Reboot    Save    Exit

### Channel Configuration

In this page you can setup camera parameters such as OSD, image quality, stream type, frame rate and bit rate.

If you have SD card to record video locally, please go to “Others” page to format the SD card firstly then come back to setup recording Schedule in this page.

If you use Motion Detect function, please click “Area setup” to bring up “Set motion detect areas” interface in next page.



### Set motion detect areas

Setup motion detect areas and its sensitivity in this page.

Press "Ctrl" then drag &drop your mouse to draw the motion detect area

**Remote Configuration**

Server configuration | Channel configuration | **Network configuration** | COM configuration

**NFS configuration Info**

Disk NO.  Server IP   
 Direcotory

**IP-Server configuration Info**

IP-Server IP  PPPoE   
 PPPoE user  PPPoE IP   
 PPPoE password  Verify password

DNS server

**DDNS configuration Info**

Device type  Enable DDNS   
 User Name  Host Name   
 Password  Verify password   
 Server Address  Port

**NTP configuration Info**

Enable NTP  NTP Host   
 Check Time  Hour Time zone:GMT  Hour  Minut

### Network configuration

In this page, setup network parameter for the IP device to login other server. The IP device works as client mode.

Click “E-mail Configuration” button to bring up “E-mail Configuration” interface in next page.

**E-Mail Configuration** ✖

Sender Name       Sender Address

User Name       Authentication  ▼

Password       Verify password

---

Email receiver Info (two at most)

No	Name	Email Address
1		
2		

      Attachment JPEG

---

Email Server  ▼            JPEG Capture  ▼

**Email Configuration**

If you implement email alarm function please setup Email parameters from this page.

**Remote Configuration**

Server configuration | Channel configuration | Network configuration | **COM configuration**

RS232 Configuration Information

Baud rate: 115.2k | Data bits: 8 | Stop bits: 1

Parity: None | Flow control: None | Work mode: Console

PPP: | Callback: |

User name: | Password: |

Remote IP: 0 . 0 . 0 . 0 | Verify: |

Local IP: 0 . 0 . 0 . 0 | Subnet mask: 0 . 0 . 0 . 0

Phone: |  Data encryption  Callback

RS485 Configuration Information

Channel No.: Channel01

Baud rate: 2400 | Data bits: 8 | Stop bits: 1

Parity: None | Flow control: None

PTZ type: Pelco-D | PTZ address: 1

Copy To: All channels |

### COM Configuration

Modify RS232 communication parameters

Setup PTZ protocol, baud rate and address

If you are using Hybrid server or Live Center program to manage this IP device, please set PTZ parameters carefully. Refer to section 2.4 for more information.

**Remote Configuration**

Alarm configuration | User configuration | Transaction configuration | Others

**Alarm input**

Alarm input: Alarm input 01  
 Alarm name:   
 Alarm type: Normal open  
 Method    Schedule    Linkage

Copy To: All alarm input    copy

**Alarm output**

Alarm output: Alarm output 01    Schedule  
 Alarm output time: 5 seconds

Copy To: All alarm output    copy

**Exception Configuration**

Exception type: Hard disk error  
 Audible warning     Upload to center     Send Email  
 Trigger alarm output:  
 Output1

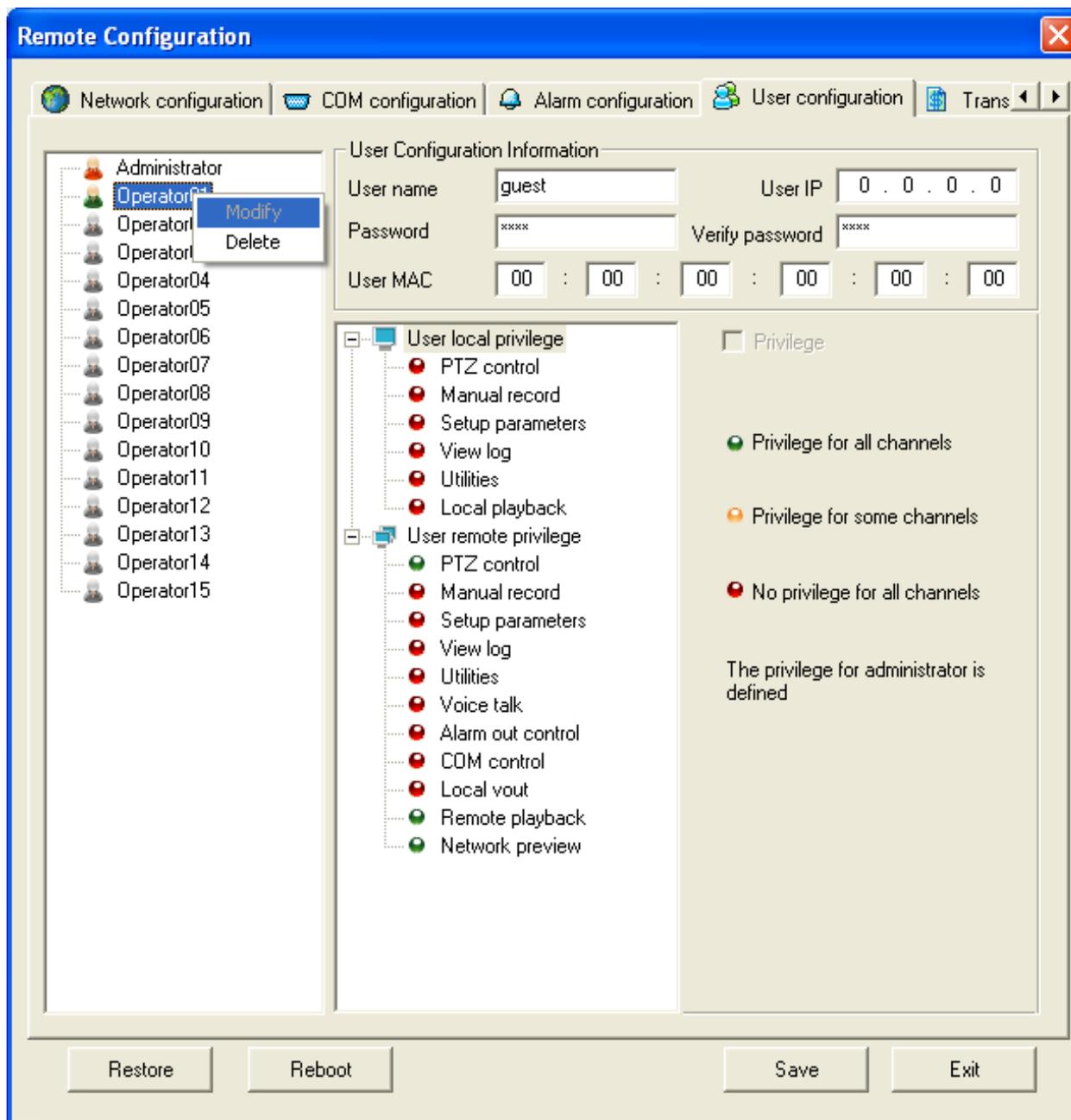
Restore    Reboot    Save    Exit

### Alarm Configuration

Setup external alarm input parameters, relay out parameters and Exception alarm settings.

For your attention, if you continuously hear BEEP sound from any IP device, the beep sound might come from “Audible warning” for “Exception type” error of “Hard disk error”. For example you don’t have SD card installed in the IP device.

To stop the beep warning, just check off the “Audible warning”



### User Configuration

User name, password and user right management.

Right-click a user ID, choose “Modify” from right-click menu. You can modify the user name, password and operation rights. After finishing, click “Save” button.

The “Administrator” default ID is admin, you cannot change this name but you can change its password.

**Remote Configuration**

Alarm configuration | User configuration | **Transaction configuration** | Others

Get through: Network sniff

ATM IP: 0 . 0 . 0 . 0      ATM type: NCR

Frame ID:

Offset: 0      Length: 0

Value:

Card No. length:

Offset: 0      Length: 0

Card No. information:

Offset: 0      Length: 0

Transaction type:

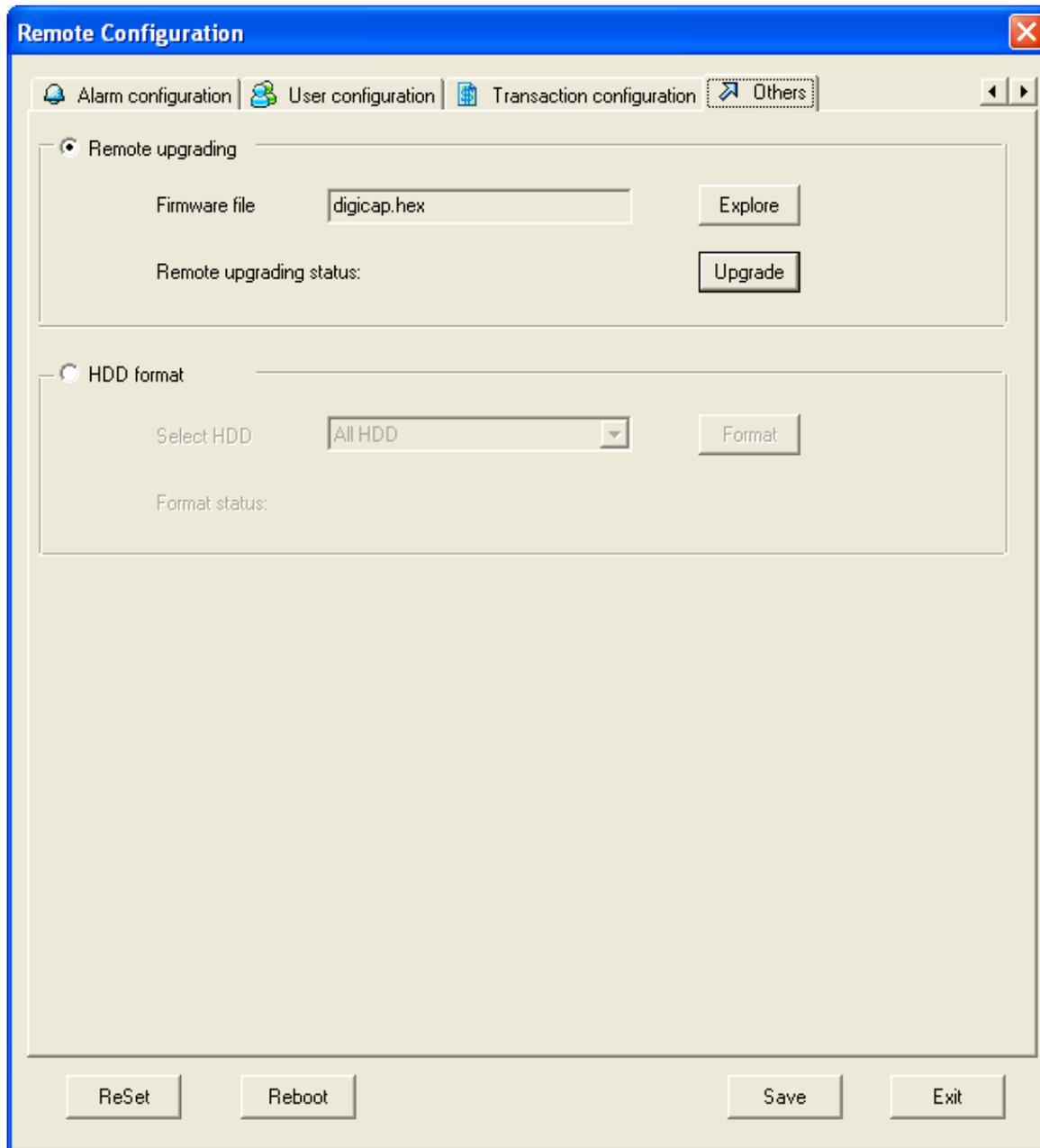
Offset: 0      Length: 0

Type: Query      Code:

ReSet    Reboot    Save    Exit

### Transaction Configuration

The features in this page are only useful for IL-6000HA series ATM/POS NetDVR.



### Others

This is the system utility. In this page you can upgrade system software and format SD card.

New SD card must format firstly before recording any video.

### 3.2.4 Remote Search and download

The screenshot displays the ILDVR web interface. At the top left, system status shows CPU:11%, 2007-08-22 23:15:58, and user admin. The top right corner features the ILDVR logo. A navigation bar contains icons for home, camera, search, settings, and help.

On the left, a tree view shows 'Embedded Net DVR' with four cameras: 01-Camera 01, 02-Camera 02, 03-Camera 03, and 04-Camera 04.

The main search area includes:
 

- File Type: ALL (dropdown)
- Search by card no
- Card No.: (text input)
- Start Time: 8/21/2007 (dropdown), 12:00:00 AM (time dropdown)
- End Time: 8/22/2007 (dropdown), 11:59:59 PM (time dropdown)

Below the search area are four video preview windows:
 

- Top-left: Camera 01, 21 08 2007 Tue 07:16:08 (S)
- Top-right: Camera 02, 08-21-2007 Tue 08:26:59 (S)
- Bottom-left: Camera 04, 08-21-2007 Tue 09:21:34 (S)
- Bottom-right: Camera 03, 08-21-2007 Tue 09:14:09 (S)

On the right, a table lists search results:

File name	Start time
ch03_30000001000000	20070821071548
ch03_30000009000000	20070821081659
ch03_30000014000000	20070821091409
ch03_30000018000000	20070821100212
ch03_30000018000106	20070821113117

At the bottom, a playback control bar shows a progress bar and a status line: 67/72121 00:00:02/00:48:04 ch03\_30000014000000. A download icon is visible on the right side of the playback bar.

## Remote playback operation steps

In main interface click button  to enter into remote playback interface. See as above diagram.

### Select target search camera in the camera list box

- Select record file type
- Select archive time
- Click “Search” button to list all matching files in file list box
- Select target playback file then click play button. Or double click the selected file.

### Download Video

In remote playback interface, selecting a target file from file list box in the right, then click download button  to save download and save it to local disk. Default save directory is C:\Download\

### Other operations

While playing back archive video, click “Capture” button  to take a snapshot. Default save directory is C:\Capture\

While playing back archive video, click “Clip” button  to begin a video clip. Click it again to end video clip.

During playing back, you can click  to pause, click  to play, click  to stop, click  to decrease playing speed, click  to increase playing speed, and click  to play in frame one by one.

 Adjust voice volume

 Switch one channel and 4 channel viewing mode.

Card No.:  This feature is only available to IL6000HA series ATM/POS NetDVR. Search video by bankcard info.

### **3.3 Video Record by Hybrid DVR Server**

Please refer to **Hybrid DVR Server and Live Center User Manual**

### **3.4 Live Center Operation**

Please refer to **Hybrid DVR Server and Live Center User Manual**

### **3.5 CMS Operation**

Please refer to **Central Management System User Manual**

## Appendix A: The pin definition of RS-232 Serial interface

The IVS-5000HC/HD video server has one RS232 standard serial interface, with RJ-45 connector. Its pin definition is as follows ('I' means input, and 'O' means output):

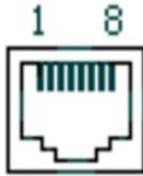
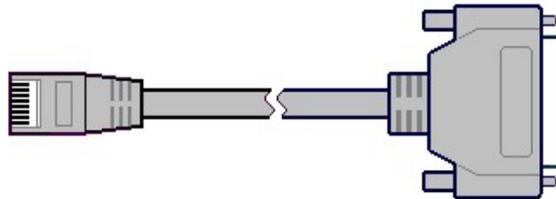
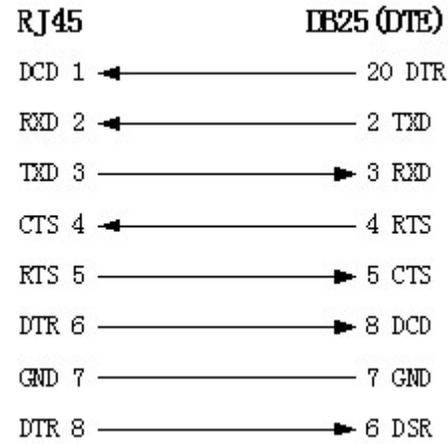


Fig 2.1 RJ-45

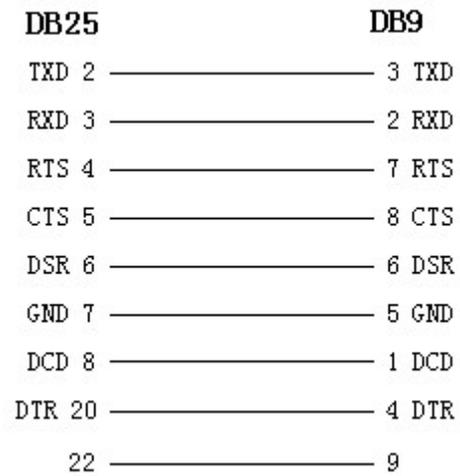
Pin No	Nome	I/O	Explanation
1	DCD	I	Carrier Detect
2	RxD	I	Receive
3	TxD	O	Transmit
4	CTS	I	Clear send
5	RTS	O	Request to send
6	DTR	O	Data Terminal Ready
7	GND		GND
8			

(1) When the RS232 interface of the IVS video server connects with the DTE equipment, one end of the cable is the 8-pin RJ45 connector (to IVS) and the other of the cable is the DB25 female connector (to DTE). Below is the description of the internal connection between RJ45 and DB25.

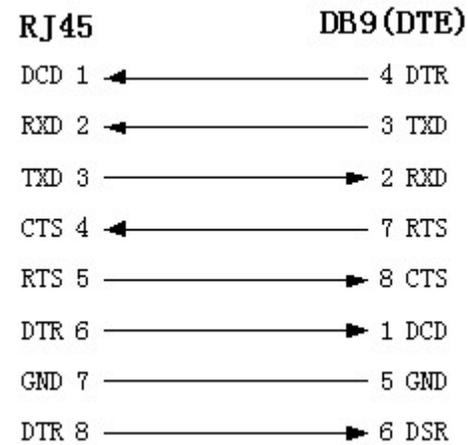




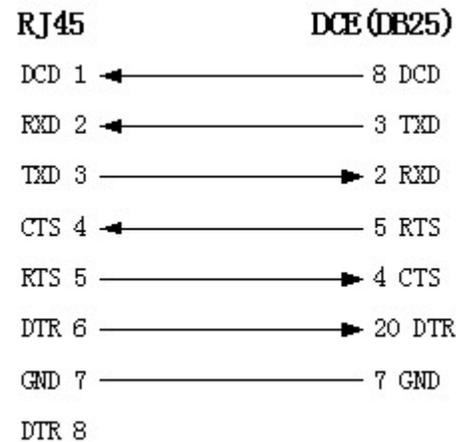
(2) 25-pin to 9-pin converter's internal connection is like this:



(3) If you don't want to use 25-pin to 9-pin convertor to connect IVS and DTE through RS232 interface, you must use RJ45-DB9 cable. Its internal connection description is:

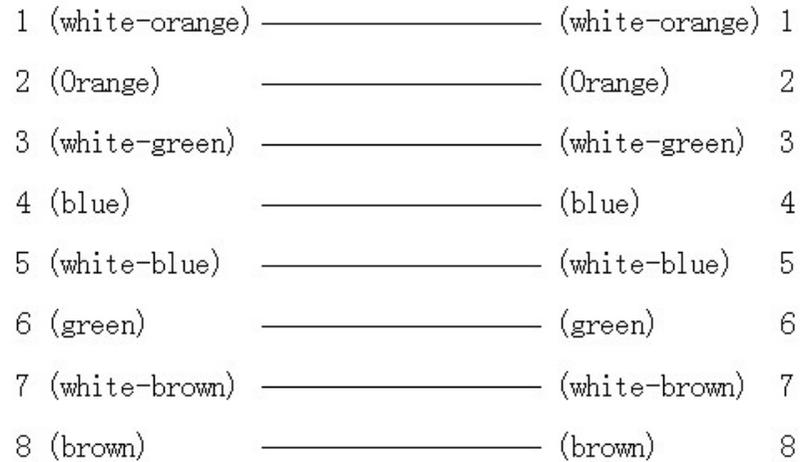


(4) When the RS232 interface of the IVS connects with the DCE (such as MODEM), one end of the cable is the 8-pin RJ45 connector and the other is the DB25 male connector. Below is the description of the internal connection between RJ45 and DB25:

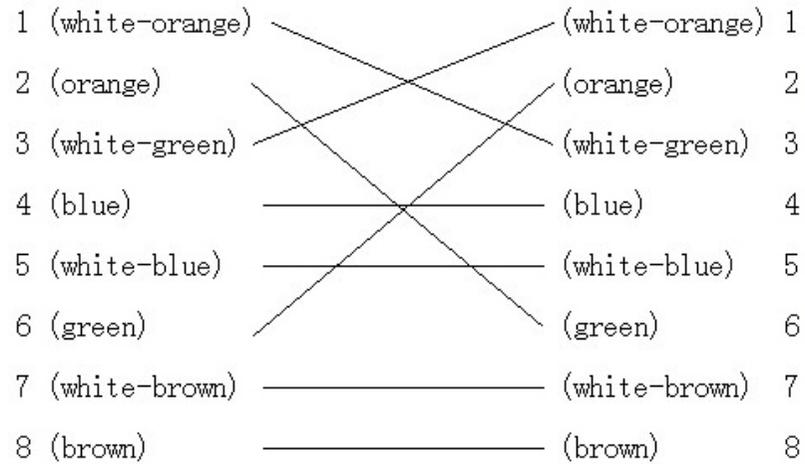


## Appendix B: The pin definition of Ethernet interface (UTP port)

(1) PIN definition of the direct network cable connecting IVS and HUB:



(2) PIN definition of the cross network cable connecting IVS and host PC:



## **Appendix C:       Compatible SD card list**

The following SD cards have been tested with ILDVR IP Camera to ensure compatibility.

- A-Data 4GB, 16GB
- Apacer 4GB, 8GB
- KINGMAX 4GB, 8GB
- Kingston 4GB, 8GB, 32GB
- SanDisk 4GB, 8GB
- Transcend 4GB, 8GB, 16GB

# Technical Support Information

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

<b>Item</b>	<b>Description</b>
<b>IP Device Model Name</b>	
<b>IP Device serial number</b>	
<b>Firmware Version</b>	
<b>Purchasing date</b>	
<b>Dealer's Contact info</b>	<b>Company name:</b> <b>Technical Engineer:</b> <b>Tel:</b> <b>Fax:</b> <b>Email:</b>