



IP Speed Dome User's Manual



TYPE A : (Indoor)



TYPE B : (Outdoor)



TYPE C : (IR Outdoor)



TYPE D : (IR Outdoor)

V1.4

※ Note: Before installation, Always make sure the local voltage Adapter Input voltage matches※



Contents Table

1. Over View	1
1.1 Features	1
1.2 What' s in the box	2
1.3 What' s in the Hardware	3
1.4 CMS Camera Management Software	5
2. Installation.....	6
2.1 Minimum PC Requirement.....	6
2.2 Live View.....	11
2.3 Status	16
2.3.1 Information.....	16
2.3.2 PING	16
2.4 Settings.....	17
2.4.1 Video.....	17
2.4.2 Camera	20
2.4.3 Audio.....	21
2.4.4 Date Time	22
2.4.5 Network	23
2.5 Maintenance.....	23
2.5.1 User Account	23
2.5.2 Profile.....	24
2.5.3 Firmware Update.....	24
2.5.4 Restart	25
2.5.5 Language.....	25
Appendix A – IPSearcher for searching IP Speed Dome on LAN.....	26
Appendix B – HTTP/RTSP Streaming URL.....	29
Appendix C –Waterproof tape working process.....	30



1. Over View

1.1 Features (TYPE A, TYPE B)

- 1/3" CMOS sensor.
- H.264 / SXVGA compression format at max 30 fps.
- 22x optical zoom and 10 times digital zoom.
- Horizontal: 360 degrees (continuous); Vertical: -5~195 degrees (Auto flip).
- Rotation speed: max. 240 degrees per second.
- Variety of communication codes are designed compatible with devices such as CMS, NVRs, and keyboards.
- 1024 sets of camera numbers.
- 4 x alarm input, 1 x alarm output.
- Support IE/CMS/NVR.
- There heater and 2 FANs are added in the Speed Dome for outdoor IP speed dome.
- Real-time H.264, MPEG-4 (Dual Codec).
- Simultaneous Multiple Streams.
- Supports Audio both input and output.
- Supports ONVIF Standard to Simplify Integration and Enhance Interoperability.
- Supports H/W Watchdog.
- Supports Mobile APP to view video for both i-OS and Android.

※ About Type C, please see "EN-VFH-8223I Easy Guide Manual"

※ About Type D, please see "EN-VFH-8335I Easy Guide Manual"



1.2 What's in the box

■ TYPE A : (Indoor)



Accessories: DC12V power adaptor, User's manual(CD), accessories pack for housing

■ TYPE B : (Outdoor)



Accessories: AC24V power adaptor, User's manual(CD), accessories pack for housing

■ TYPE C : (IR Outdoor)



Accessories: AC24V power adaptor, User's manual(CD), accessories pack for housing.



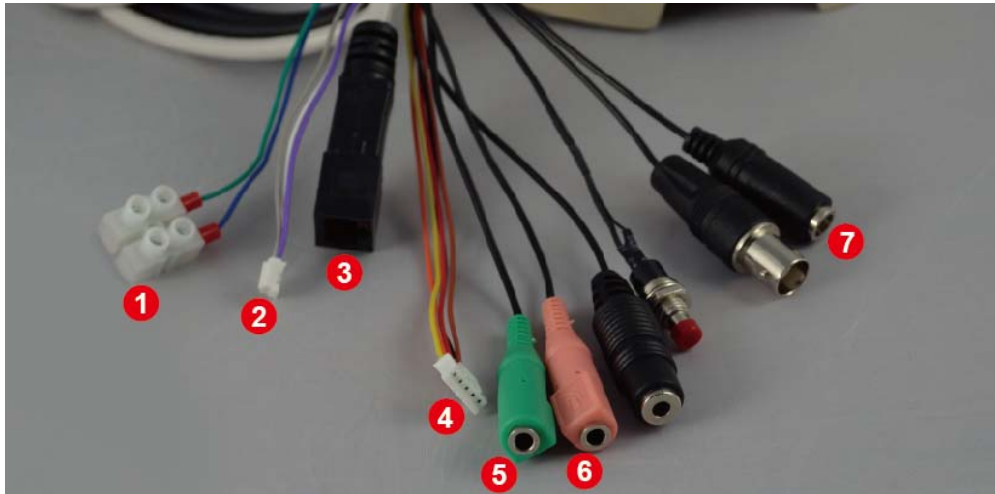
■ TYPE D : (IR Outdoor)



Accessories: AC24V power adaptor, User's manual(CD), accessories pack for housing.

1.3 What's in the Hardware

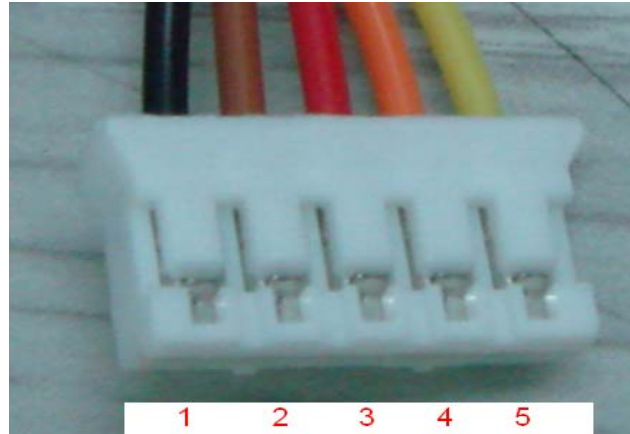
■ Wiring Cables (TYPE A 、 TYPE B)



No.	Description	Function
1	RS-485	For P.T.Z. KeyBoard (EX: KB-100)
2	Alarm Out	Alarm Singal OUT (See next page)
3	LAN	Ethernet 10/100M connector
4	Alarm In	Alarm signal IN (see next page)
5	Line Out	Siren audio output
6	Line In	Active Microphone connection
7	Power In	TYPE A(Indoor): DC 12V \ominus \oplus TYPE B (Outdoor) AC 24V



■ Alarm IN wiring



No	Description
1 (Black)	Alarm In 1
2 (Brown)	Alarm In 2
3 (Red)	Alarm In 3
4 (Orange)	Alarm In 4
5 (Yellow)	GND

■ Alarm OUT wiring



No	Description
1 (Purple)	Relay N.O.
2 (Gray)	COMM
3 (White)	Relay N.C.

Max. 120Vac@1A or 24Vdc@2A for Drive Alarm Device



1.4 CMS Camera Management Software

You can install CMS on a PC to management your IP speed dome, please refer to "CMS User's Manual-V1.0.pdf" .

時間	信息
2015-03-31 00:47:51	失去連接
2015-03-31 00:47:53	正在連接
2015-03-31 00:47:54	失去連接
2015-03-31 00:47:59	正在連接
2015-03-31 00:47:59	登入成功

CPU: 26%
MEM: 52%
Rem. HD: 0%



2. Installation

2.1 Minimum PC Requirement

- Hardware:

 - Intel® Pentium® DUAL Core™

 - 2 GB system memory or above

 - Sound Card: DirectX® 9.0c compatible sound card

 - Video Card: 3D hardware accelerator card required – 100% DirectX®9.0c compatible

 - Ethernet network port/card

 - 10/100 Ethernet switch/hub

- Software:

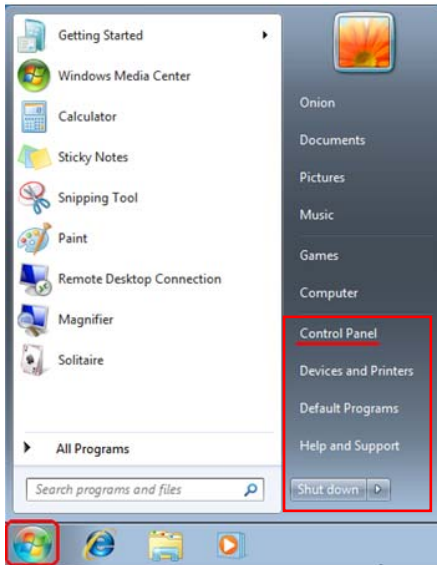
 - Windows® XP Service Pack 2 or above

 - Resolution of screen setting: 1280x960 or higher for the display of 720P/1080P

2.2 Connecting IP Speed Dome to your computer



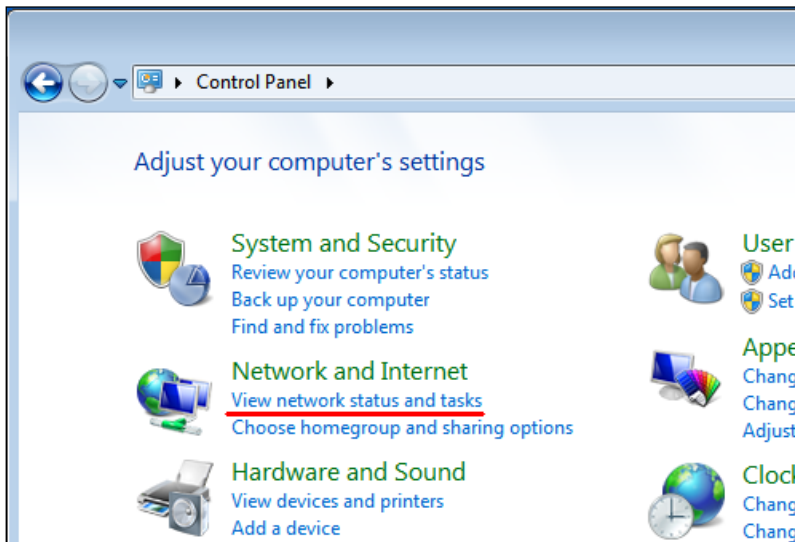
- Change computer' s IP address – Please set PC' s IP address to be "192.168.1.XXX" except 192.168.1.221(IP speed dome default IP). The IPSearcher utility software can be used on the PC to find out the IP speed dome' s IP in the LAN. (Refer to appendix A)



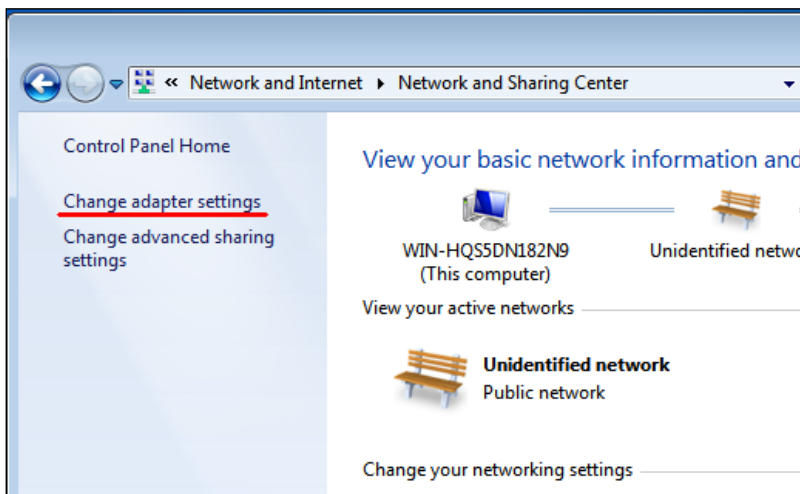
Click [Start → Control Panel]



Click [View network status and tasks]

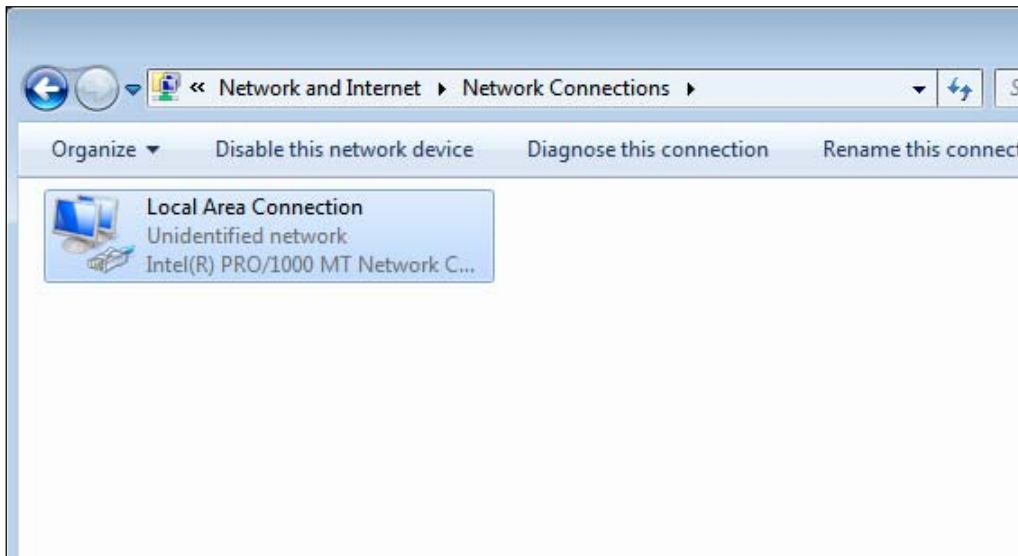


Click [Change adapter settings]

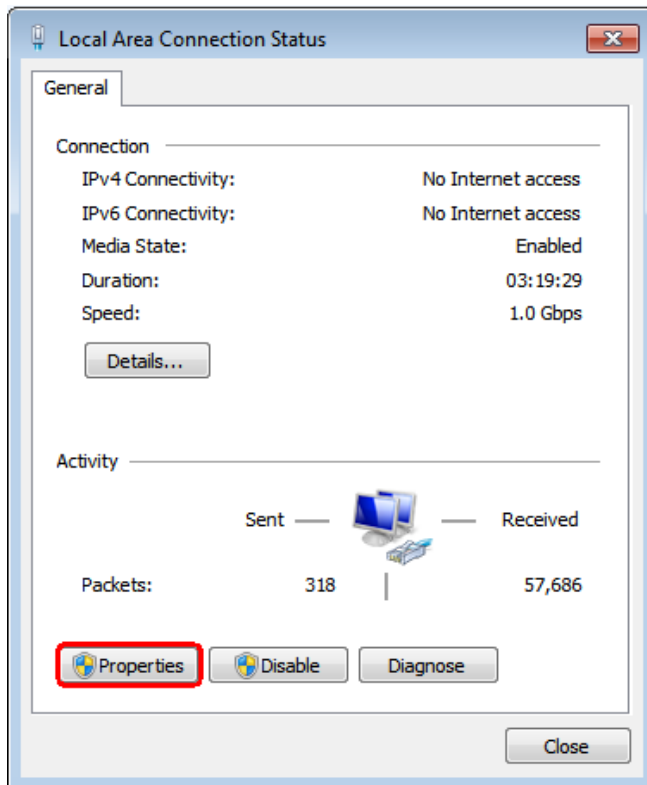




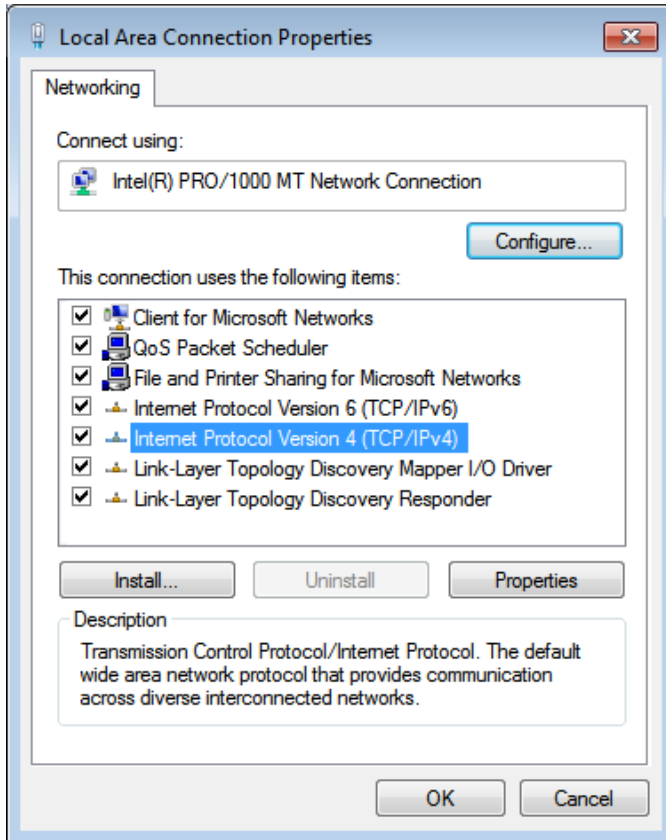
Double Click [Local Area Connection]



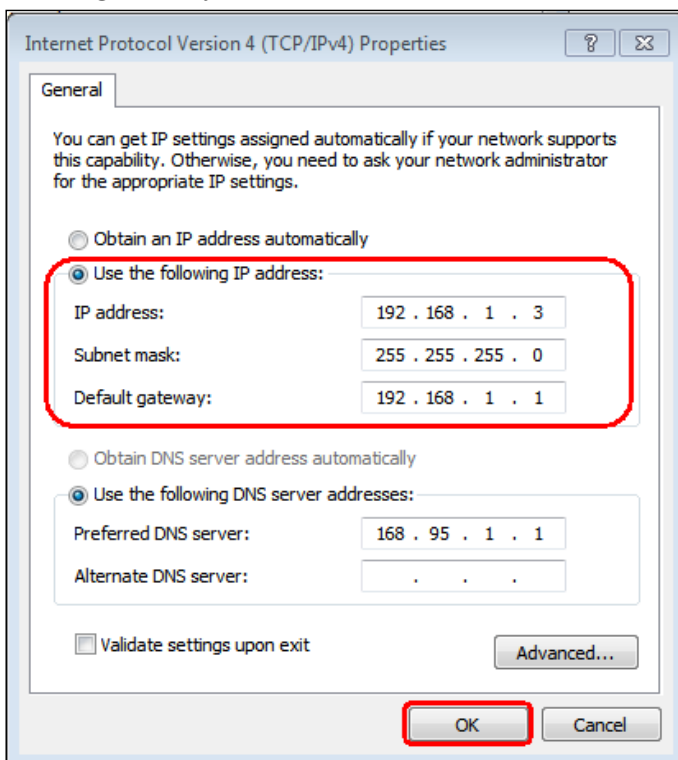
Click [Properties]



Double click [Internet Protocol Version 4 (TCP/IPv4)]



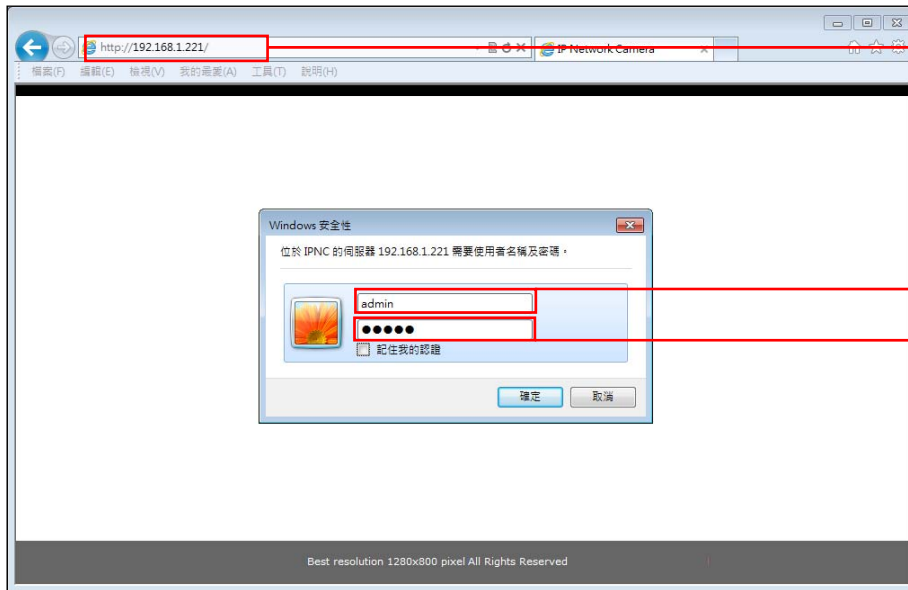
Select [Use the following IP address] and enter IP address, subnet mask and default gateway, then press [OK].





■ Login IP speed dome via WEB browser

You may visit IPCamera' s homepage via IE or other compatible web browsers.



Run a browser and enter IP speed dome' s IP- 192.168.1.221 in URL.

Default account: admin

Default password: admin

※Highly recommend to change and save securely the password after initial login※

It displays system information after you login IP speed dome.

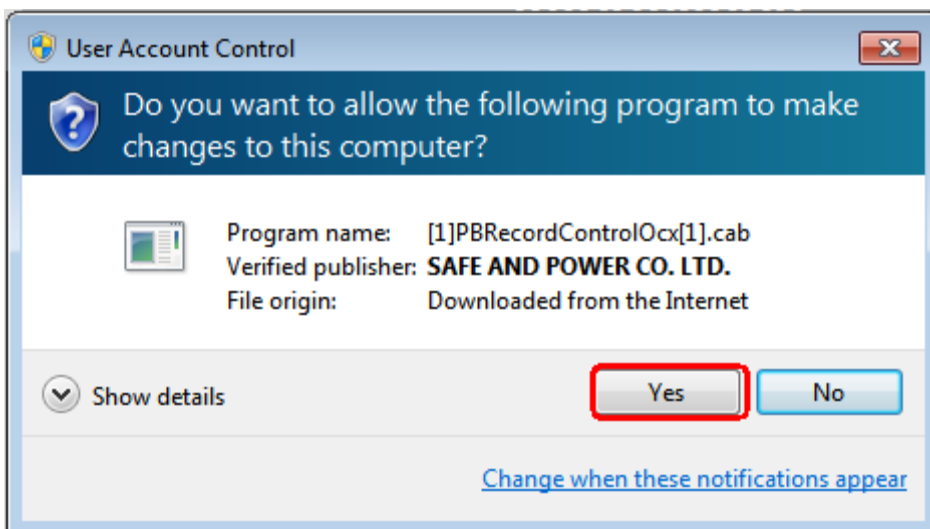
Category	Value
Camera	IPCAM
Model	VIT-8Series
Uboot Version	U-Boot 1.3.4 (Aug 22 2013 - 18:27:44) 1.0.9
Kernel Version	IPNC_DM385_3.0.0 #116
Firmware Version	P200 VER 2.1.18-01-B869 (2015/01/16 09:37:37)
IP	192.168.8.200
Netmask	255.255.240.0
Gateway	192.168.9.4
DNS	168.95.1.1
MAC	00:16:55:08:07:60
1st HTTP Streaming URL	http://192.168.8.200/video0.m4v
2nd HTTP Streaming URL	http://192.168.8.200/video1.m4v
1st RTSP Streaming URL	rtsp://192.168.8.200/video0.sdp
2nd RTSP Streaming URL	rtsp://192.168.8.200/video1.sdp

[VACRON CMS](#)



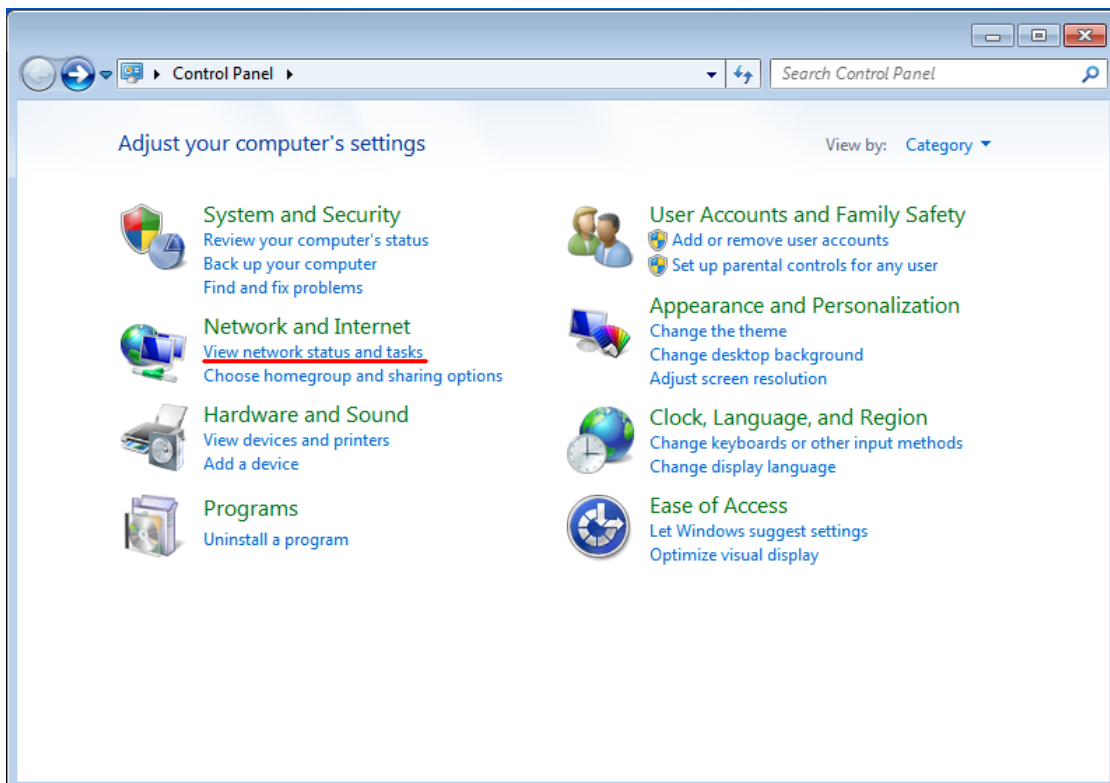
2.3 Live View

If you prefer using Safari®, Chrome® or Firefox®, you have to install QuickTime® Player when the browsers can't display video. If you use Windows Internet Explorer, it will ask you to install ActiveX program when initial login.

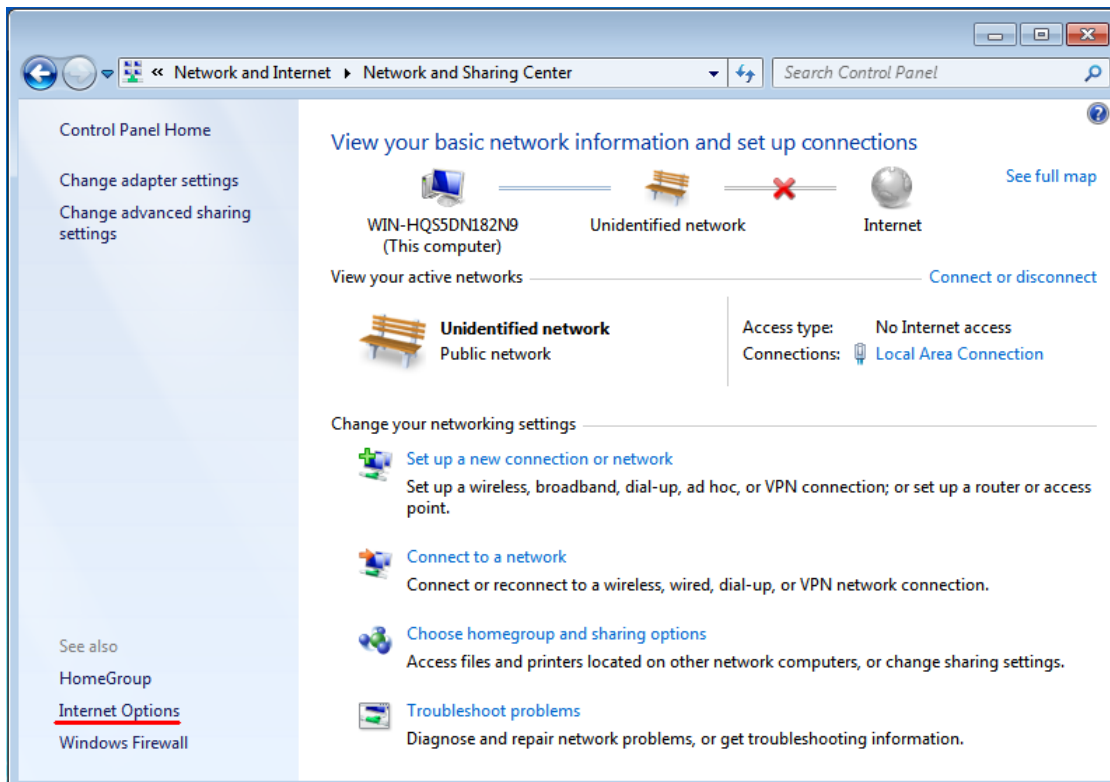


You may need to change security parameter for Live View Player playing video well.

Enter [Control Panel] then click [View network status and tasks].

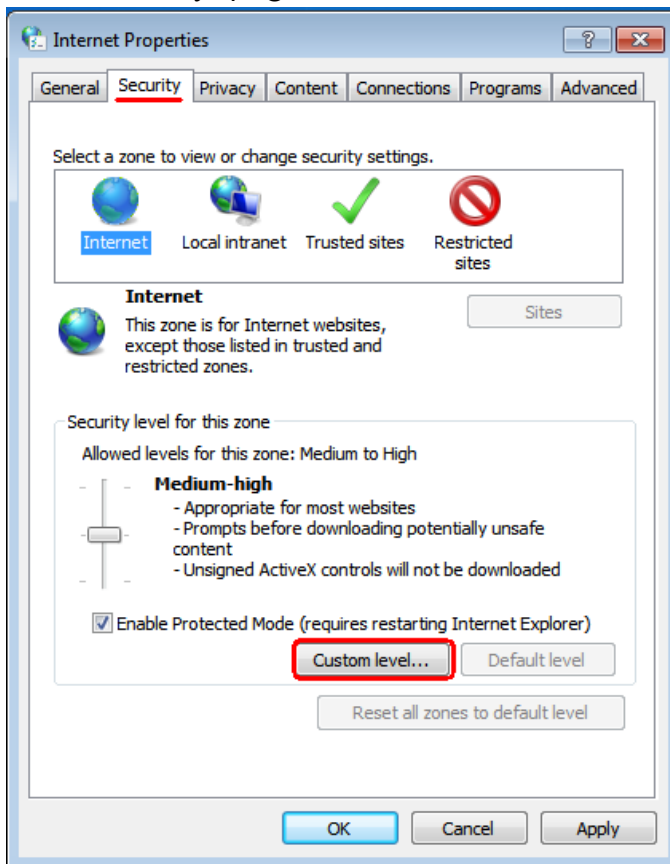


Click [Internet Options].

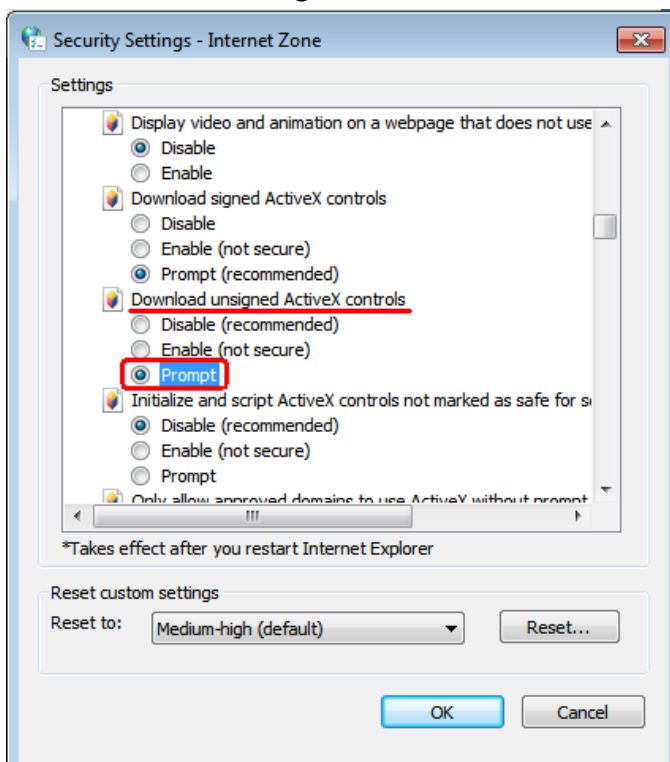




Enter [Security] page then click [Custom level].



Set [Download unsigned ActiveX controls] to be [Prompt].





Live View Control Buttons

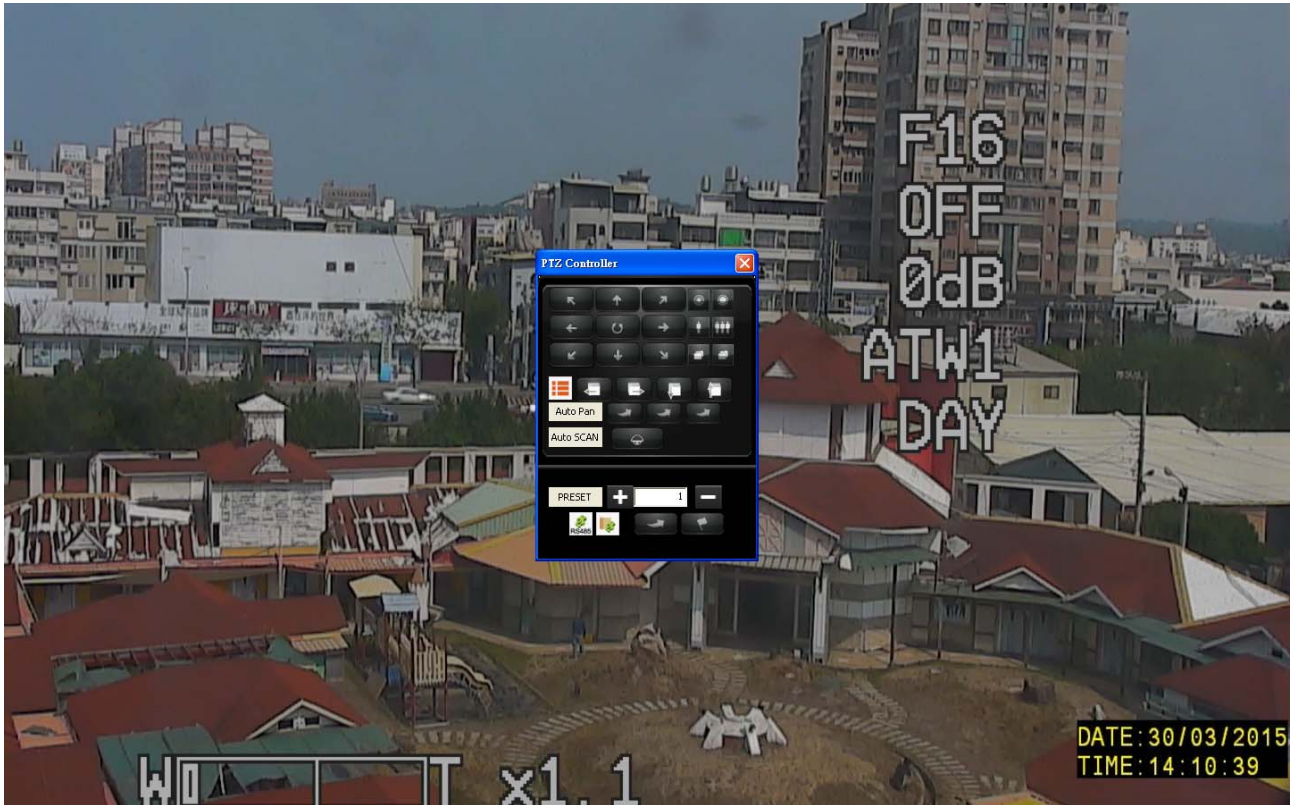


	Full Screen		Auto focus (once)
	Record		Fine tuning +
	Snapshot		Fine tuning -
	PTZ Left		MENU Enter (OSD Main Menu for Lens)
	PTZ Right		MENU Left
	PTZ Up		MENU Right
	PTZ Down		MENU Up
	PTZ Zoom in		MENU Down
	PTZ Zoom out		

Preset: <input type="text" value="1"/>	Preset point - a desired camera direction can be registered as a preset position
<input type="button" value="Goto"/> <input type="button" value="Set"/> <input type="button" value="Del"/>	Goto → Manual mode to direct the camera to monitor the Preset point. Set / Del → Set / Delete Preset point
Auto Scan: <input type="button" value="Start"/>	Auto Scan start, allows the camera to continuously patrol automatically among the specific preset points at defined intervals; stops when PTZ/OSD is in operation.
Auto Pan: <input type="button" value="Start"/> <input type="button" value="End"/> <input type="button" value="Run"/>	Start : Start point End : End point Run: Auto Pan allows the camera to patrol between two preset points; stops when PTZ/OSD is in operation.



Full Screen Operation: Click to select Full Screen Mode Operation; PTZ Controller OSD panel will pop up on the screen.



		Pan / Tilt Operation
		IRIS- / IRIS+ Iris adjustment
		Zoom IN / Zoom Out
		Focus near / Focus far
		OSD Menu Operation
		Auto Pan Setting / Run
		Auto Scan starts
		Preset Select / Setting / Run

※PTZ controller is a general operation interface, some models do not fully support the operation.



2.4 Status

2.4.1 Information

Information	
Camera	IPCAM
Model	IPCAM Series
Uboot Version	U-Boot 1.3.4 (Aug 3 2012 - 13:46:40) 1.0.2
Kernel Version	IPNC_DM365_3.0.0 #112
Firmware Version	P100 VER 2.1.1-B451 (2012/12/20 19:07:19)
IP	192.168.1.221
Netmask	255.255.255.0
Gateway	192.168.1.254
DNS	168.95.1.1
MAC	06:97:0F:06:97:0F

It displays hardware and firmware version of IP speed dome.

2.4.2 PING

Ping

Ping Destination	<input type="text" value="192.168.1.50"/>
Number of Ping [1 - 100]	<input type="text" value="4"/>
Ping Packet Size [56 - 5600 bytes]	<input type="text" value="56"/>

```

PING 192.168.1.50 (192.168.1.50): 56 data bytes
64 bytes from 192.168.1.50: icmp_seq=0 ttl=128 time=4.3 ms
64 bytes from 192.168.1.50: icmp_seq=1 ttl=128 time=0.5 ms
64 bytes from 192.168.1.50: icmp_seq=2 ttl=128 time=0.5 ms
64 bytes from 192.168.1.50: icmp_seq=3 ttl=128 time=0.6 ms

--- 192.168.1.50 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 0.5/1.4/4.3 ms

```

Use "Ping" to verify if a remote peer is reachable. Enter a remote IP address and click "Test" to ping the remote host. The result would be shown on Result Table.



2.5 Settings

2.5.1 Video

In this page you can set parameters for Video Stream.

- Camera: Type the camera title.
- Stream Type: Select the stream type.
 - Single : This will have single stream use cases only.
 - Dual : This will enable dual stream use case with second resolution.
- Codec: Select the required codec. The options available are:

Stream Type	Codec Combo
Single Stream	[H264] 、 [MPEG4]
Dual Stream	[H264+JPEG] 、 [MPEG4+JPEG] 、 [Dual H.264] 、 [Dual MPEG4] 、 [H264+MPEG4]



- Resolution: Select the required image resolution for the streams. The options available are:

1) Single Stream mode:

Codec	Selectable resolution
H.264	[H264:720]、 [H264:D1]、 [H264:SVGA] *Example- [H264:720] : Video codec is H.264 with vertical resolution @ 720p.
MPEG4	[MPEG4:720]、 [MPEG4:D1]、 [MPEG4:SVGA]

2) Dual Streams mode:

Codec	Selectable resolution
H.264+JPEG	[H264:720 +JPEG:VGA] [H264:D1+JPEG:D1] [H264:720+JPEG:720] *Example-[H264:720 +JPEG:VGA] : The first video stream codec is H.264 with resolution @720p. The second video stream codec is JPEG with resolution for VGA(640*480)
MPEG4+JPEG	[MPEG4:720 +JPEG:VGA]、 [MPEG4:D1+JPEG:D1] [MPEG4:720+JPEG:720]
Dual H.264	[H264:720+H264:QVGA]、 [H264:720+H264:VGA] [H264:D1+H264:QVGA]、 [H264:720+H264:VGA]
Dual MPEG4	[MPEG4:720+MPEG4:QVGA]、 [MPEG4:D1+MPEG4:D1] [MPEG4:D1+MPEG4:QVGA]
H.264+MPEG4	[H264:D1+MPEG4:D1]

- TAB for Stream 1- Stream 2: For setting individual parameters for each stream.
- Frame Rate: Select the required frame rate for JPEG, MPEG4 and H.264. This



change based on the selected codec combo.

- **Bit Rate:** Type the required bit-rate for both MPEG4 Setting and H.264 Setting. Bit-rate values ranges between 64 and 10000 from stream1 and 64 to 8000 for stream2.
- **Rate Control :** Select the required option
 - **OFF :** This will switched off the rate control and will encode the frame in constant QP mode for all MBs (Macro-Blocks).
MPEG4 will be coded with QP = 4
H264 will be coded with QP = 28
 - **VBR :** Variable Bit rate (max_delay set is for 1000msec).
 - **CBR :** Constant Bit rate. This will have frame skips to maintain bit rate with specified VBV buffer (max_delay set is for 1000msec).
- **Quality Factor (For JPEG):** Type the selected image quality required for JPEG stream. Quality value can vary from 3 to 99.
- **Overlay Setting:** Select Enable Date and Time check box to activate the function.
 - **Date:** This will enable/disable insertion of Data as per the position specified corner of the captured image.
 - **Time:** This will enable/disable insertion of Time as per the position specified corner of the captured image
 - **Text:** This will enable/disable insertion of Text as per the position specified corner of the captured image

Note:

The maximum video resolution is different for both digital zoom ON and OFF. Maximum video resolution 1280 x 1024 pixels can be reached when digital zoom is turned off.

Maximum video resolution will become 1280 x 960 pixels when digital zoom is turned on.



2.5.2 Camera

LIVE VIEW	STATUS	SETTINGS	V2.1.18-01-B889	admin Logout
<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <ul style="list-style-type: none"> Settings Video <li style="border: 1px dashed gray;">Camera Audio Date Time </div> <div style="width: 80%; text-align: center;"> <h3>Camera</h3> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%; border-bottom: 1px solid gray; padding-bottom: 5px;">Camera</div> <div style="width: 60%; border-bottom: 1px solid gray; padding-bottom: 5px;">IPCAM</div> </div>				

PTZ	
Protocol	PelcoD ▼
Controller	Network ▼
Device ID	1 ▼
Baud Rate	9600 ▼
Speed	16 ▼
Min. Move Time	0 ▼ sec

■ PTZ

Protocol : Select a protocol for IPCamera and Pan-Tilt System.

Controller: Select Control source, Network (IE, Default) or RS485 (Keyboard)

Device ID/ Baud Rate: Select device ID (or address) and baud rate assigned on Pan-Tilt System.

✘The PTZ Device ID must match the DIP switch settings✘

Speed : The Pan-Tilt System is moving quicker if you set it to be higher.

Min. Move Time : Some control device sends PTZ move and stop command at the same time. Enable this option for IPCamera to transit PTZ moving command in a fixed period of time.



2.5.3 Audio

Enable Audio	<input type="checkbox"/>
Audio Mode	Both Mic & Speaker

Audio Input

Audio Source	Mic In
Input Gain [0 - 100]	25
Encoding	G711u
Alarm Level [0 - 100]	50

Audio Output

Output Volume [0 - 100]	75
-------------------------	----

Accept Reset Default

- Enable Audio: This will switch ON/OFF the audio in camera.
- Audio Mode: You can change the audio mode in the Network camera in one of the following ways:
 - Only Mic: Enables only audio capture in camera.
 - Only Speaker: Enables only siren audio output.
 - Both Mic & Speaker: Enables both siren audio & capture in active microphone.
- Input Gain: Sets the input capture gain, values set from 1-100, setting this value to minimum will not mute the camera as this will set only the gain to lower values. Default = 25
- Encoding: Set which codec is used for encoding. G711 and AAC LC are supported currently.
- Sample Rate: Supports 8 kHz and 16 kHz sampling options from this drop



down menu.

- Output Volume: Set the audio playback volume, values set from 1-100.

2.5.4 Date Time

The NTP configuration allows IP speed dome obtain time from an NTP server or sync with your computer.

NTP						
	Year	Month	Day	Hour	Minute	Second
PC Time	2012	6	12	10	0	15
Device Time	2012	6	12	10	0	8
Manual <input checked="" type="radio"/>	<input type="button" value="PC Time"/>					
Synchronize with Time Servers <input type="radio"/>	SNTP Server ntp.ucsd.edu					
	Time Zone + 8					

- PC Time: It displays current time on your computer.
- Device Time: It displays current time on IP speed dome.
- Manual: Click [PC Time] then [Accept] button to sync IP speed dome' s time with your computer.
- Synchronize with Time Server:
 - SNTP Server: Enter IP or FQDN of an SNTP server.
 - Time Zone: Select the required time zone from the drop-down list. If this is not done, the time given by the unit may be incorrect.



2.5.5 Network

Network		
DHCP <input type="radio"/>	Hostname	<input type="text"/>
	MTU	1500
Static IP <input checked="" type="radio"/>	IP address	192.168.1.201
	Subnet mask	255.255.255.0
	Default Gateway IP	192.168.1.254
	MTU	1500
Primary DNS Server	168.95.1.1	Secondary DNS Server <input type="text"/>
<input type="button" value="Accept"/> <input type="button" value="Reset"/> <input type="button" value="Default"/>		

There are two types of IP network settings, if there is a DHCP server or broad band router setup in your IP network, you may set it to be DHCP. If you set up a NVR (Network Video Recorder) to recording IP speed dome' s video, it is better set IP type to be "Static IP" .

2.6 Maintenance

2.6.1 User Account

There are three operating levels when entering the Web UI. Logging-in as the admin allows you to change all settings.

User Account		
Admin User Name	<input type="text" value="admin"/>	
Admin Password	<input type="password" value="....."/>	Confirm Password <input type="password" value="....."/>
Operator User Name	<input type="text" value="user"/>	
Operator Password	<input type="password" value="....."/>	Confirm Password <input type="password" value="....."/>
Viewer User Name	<input type="text" value="viewer"/>	
Viewer Password	<input type="password" value="....."/>	Confirm Password <input type="password" value="....."/>
HTTP Port [1 - 65535]	<input type="text" value="2300"/>	
Sync With NVR	<input checked="" type="checkbox"/>	

- Admin: You can operate all functions in Web interface.
- Operator: You can operate all functions in Web interface except User Account.



- Viewer: You can only monitor the Web interface, but cannot operate all function and set parameters.
※ Highly recommend setting up “Viewer” operating level for general viewing purpose. ※
- HTTP Port: You can change listen port of WEB GUI.
- Sync With NVR : When this option is disabled, it doesn't allow modify command sent from NVR or via HTTP API.

2.6.2 Profile

Profile	
Backup Configurations	
Configuration File	Backup
Restore Configurations	
<input checked="" type="radio"/> Upload Configuration File	<input type="text"/> 瀏覽...
<input type="radio"/> Restore Default Configurations	<input type="text"/>
<input type="checkbox"/> Keep Network Settings	Restore

- Backup Configurations: Click the Backup Settings button to save your current settings to a file.
- Restore Configurations: You can backup settings to a file and restore settings from that file. You also can restore all settings back to default by selecting Restore Default Configurations and click Restore.

2.6.3 Firmware Update

Firmware Update	
Upload Firmware File	<input type="text"/> 瀏覽... Update

Please select then click [Update] button to upload firmware. During the



upgrade process please don't click on any other button or don't try changing camera setting, this may lead camera to abort upgrade process and subsequent reboot will result in undesired behavior.

2.6.4 Restart

Restart

Restart System Restart.

Accept

Tick [Restart] then click [Accept] button to restart IPCamera.

2.6.5 Language

Language

Web UI Language English

Accept Reset

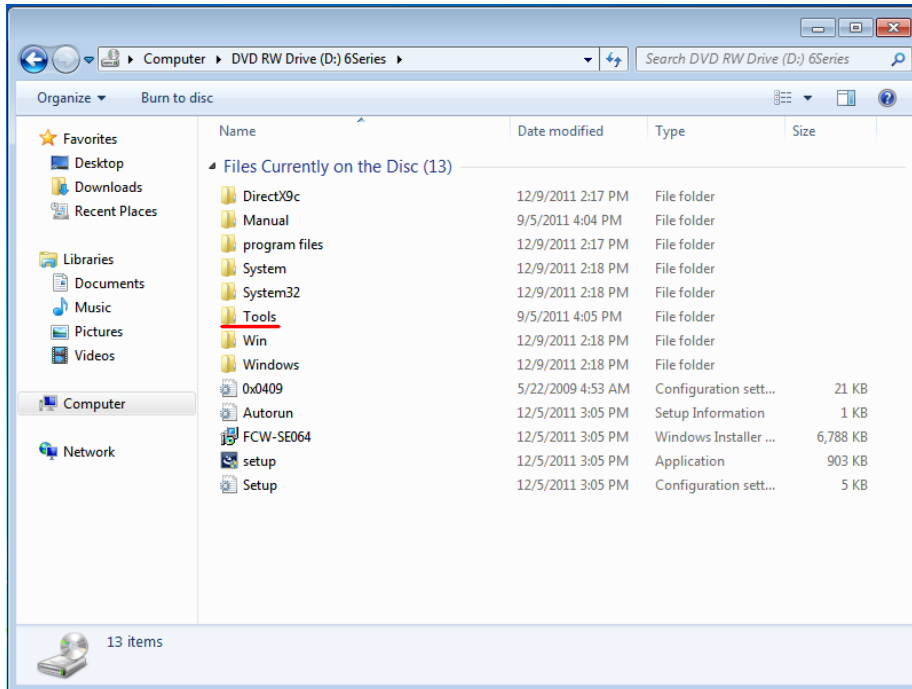
Select a language for WEB GUI



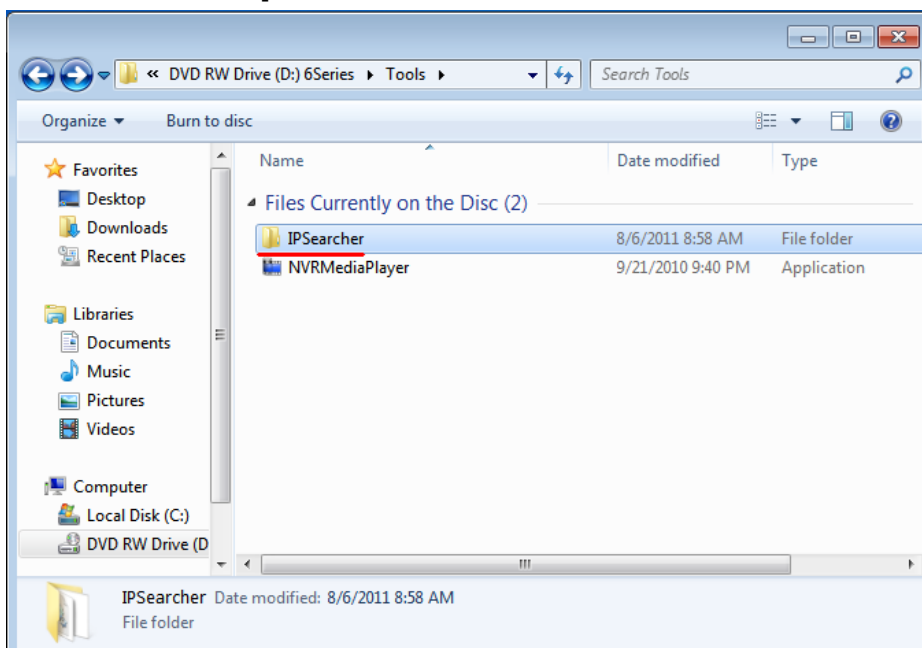
Appendix A – IPSearcher for searching IP Speed Dome on LAN

There is a tool which can running on a computer to search IP speed dome in local area network. It allows you to change IP speed dome' s IP address much easier.

- Enter the folder [Tools] in the CD.

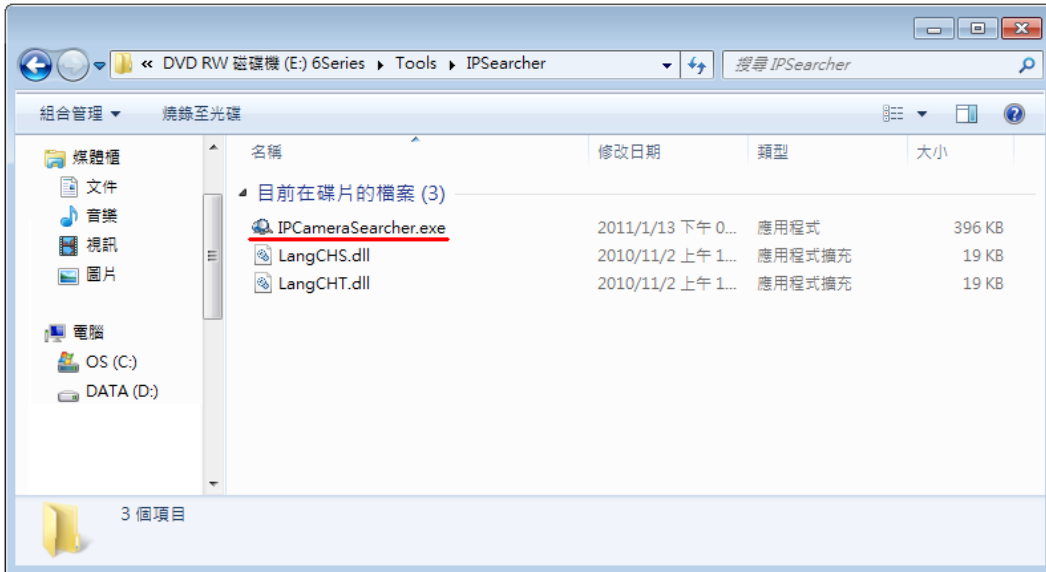


- Double click [IPSearcher]

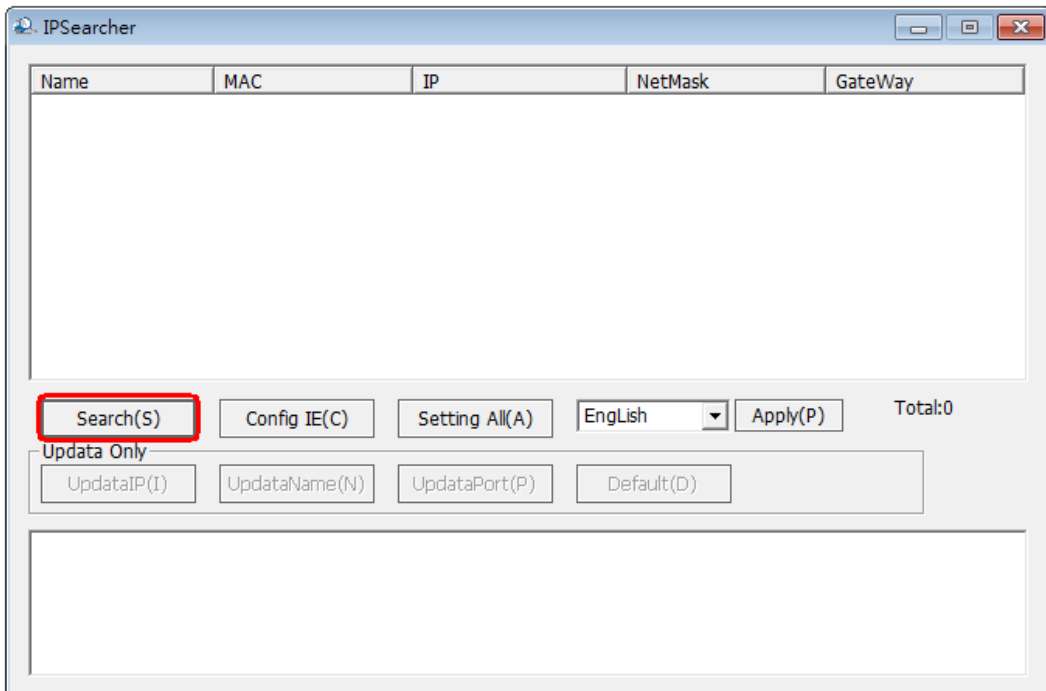




- Running [IPCameraSearcher] (It may show "IPCameraSearcher.exe" if your Windows® displays full file name.)

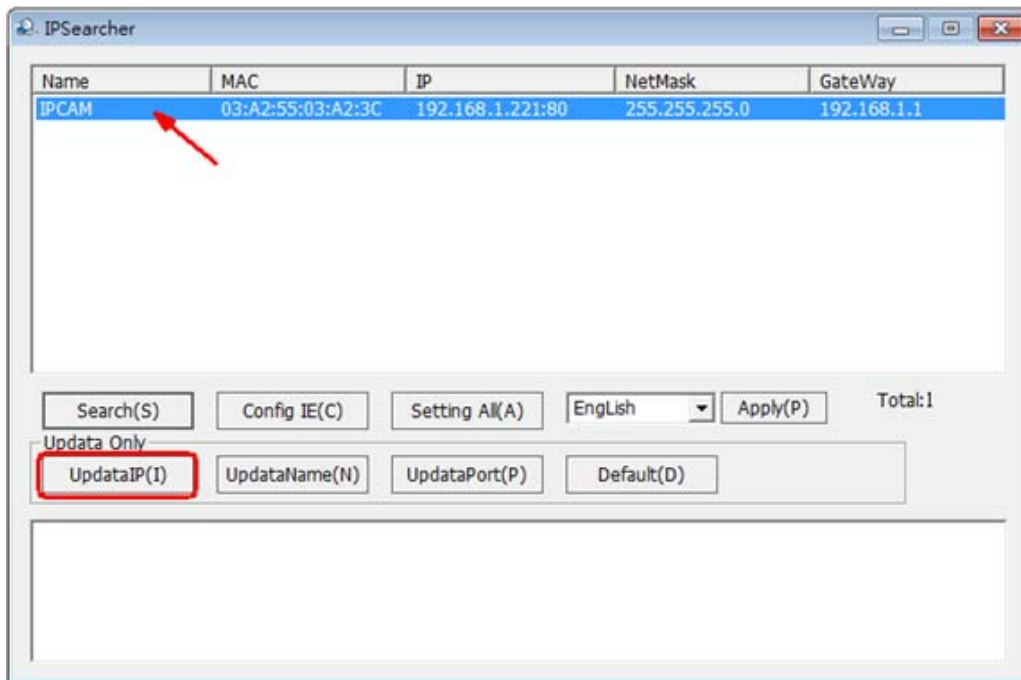


- Click [Search(s)]

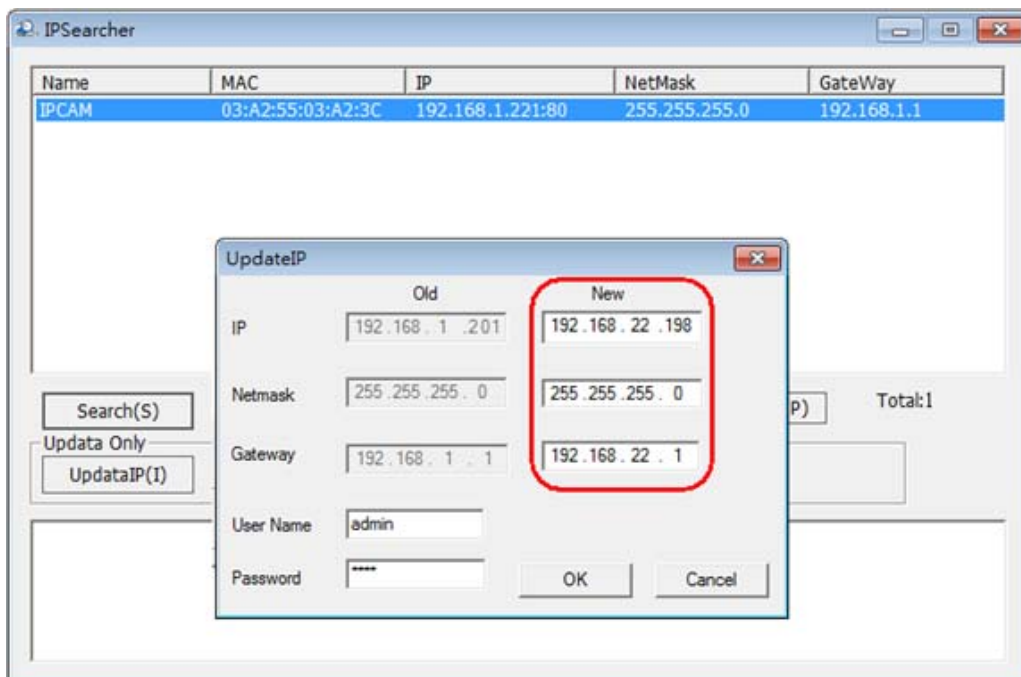




- It displays searched device(s) in 5-10 seconds, please select an IP speed dome then click [UpdataIP(I)].



- Enter User Name and Password then enter new IP, Netmask and Gateway. (The default User Name is "admin" , Password is "admin")
- Press OK then open a browser for connecting to this IP speed dome.





Appendix B – HTTP/RTSP Streaming URL

IP speed dome supports HTTP/RTSP streaming URL for third part CMS/NVR or software to get video from IP speed dome.

- HTTP

URL: `http://<ipcam:http_port>/ipcam/avc.m4v`

Example: `http://192.168.1.221/ipcam/avc.m4v`

- RTSP

1st stream URL: `rtsp://<ipcam:554>/PSIA/Streaming/channels/0`

Example: `rtsp://192.168.1.221:554/PSIA/Streaming/channels/0`

2nd stream URL: `rtsp://<ipcam:554>/PSIA/Streaming/channels/1`

Example: `rtsp://192.168.1.221:554/PSIA/Streaming/channels/1`

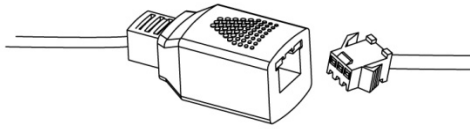


Appendix C –Waterproof tape working process

- Apply to the IP camera, RJ-45 and DC Power JACK connector junction, when exposed in the outdoor environment, increase its water-resistance.



Waterproof tape (Attached as accessories with vehicle camera)



RJ45 connector junction



DC JACK Power connector junction

- Working process

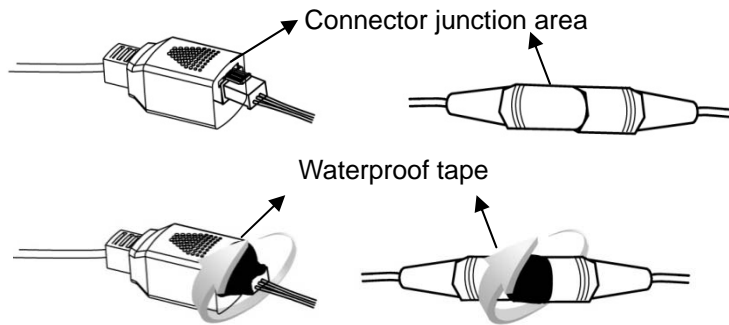
1. Tear the paper from waterproof tape.



2. Completed as below photo showed. To stretch out the waterproof tape a little bit for better stickiness (Be pull gently)



3. To wrap the water tape along the connector junction area (Please pull gently). After wrap is completed, and then push down on the tape to increase integrated closely.



Wrap the tape along the connector junction area

4. Completed as below photo showed.



RJ45 connector junction



DC JACK Power connector junction



FUHO TECHNOLOGY CO.,LTD.
No. 30, Lane 726, Jinma Rd, Sec. 3,
Chang Hua City, Taiwan 500.
TEX:886.4.751.2881