

# User Manual

Explosion Proof (4.2X) Motorized H.264+ 2MP Bullet IP Camera V1.3\_20190703





This is a 1 / 2.8" Megapixel CMOS Sensor stainless steel IP camera with a built-in web server.

The user can view real-time video via IE browser. It supports **H.264+**, **H.264**, and **M-JPEG** video compression, providing smooth and high video quality.

With a user friendly interface, it is an easy-to-use IP camera for security applications.

### **Topics**

Inside the folder 'Topics' you will find the documentation related with this IP Camera. You can click on 'Read More' for directly opening the file regarding the topic you would like to read.

Adobe Acrobat is recommended.

Warnings, Cautions, Copyright, Terms of Use and
 Maintenance

Read More

II. Product Specifications

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Product features, spec table and pictures.



#### III. Product Installation

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Event Setting, Motion Detection, Record Time Setting, Schedule, Log List.



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Steps for resetting the IP Camera to factory default.

IX. Universal Password

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Steps for using universal password.

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Read More



# Warnings, Cautions, Copyright, Terms of Use and Maintenance

#### **WARNING**

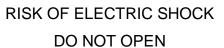
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

#### **CAUTION**



#### **CAUTION**





CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

#### **COPYRIGHT**

THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.



#### Intended Use of the Camera

Certification	Mark
ATEX	😉 II 2G Ex db IIC T6 Gb
ATEX	II 2D Ex tb IIIC T85°C Db
IECEx	Ex db IIC T6 Gb
IECEx	Ex tb IIIC T85°C Db

Hazardous Area Classification: Zone 1, Zone 2, Zone 21, Zone 22.

IP Degree: IP68, IP69

**Ex Standards:** IEC 60079-0: 2011 EN 60079-0: 2012

⟨εx⟩II 2GD

Baseefa18ATEX0086X

G3/4H

IEC 60079-1: 2014 EN 60079-1: 2014 IEC 60079-31: 2013 EN 60079-31: 2014

#### Nameplate

Model: HLZ-61KDS IECEX BAS 18.0059X

Ingress Protection: IP68 IP69

Input Voltage: DC12V Tamb: -40°C to 70°C

Ex db IIC T6 Gb

Ex tb IIIC T85°C Db

S/N.:

#### Warning:

Do Not Open When an Explosive Atmosphere is Present.

HUND Hunt Electronic Co., LTD. 9F, No.171, Sec. 2, Datong Rd., Xizhi Dist,

New Taipei City, Taiwan

#### **Special Conditions for Safe Use**

To prevent hazardous situation and unnecessary property loss, it is essential that the user have a clear understanding of how these instructions are executed as they are introduced below.

- An irreparable damage may be done to the camera by attempting to disassemble the machine without supervised or authorized assistance from our service or approved local dealers.
- The process of installation should be conducted by professional personnel with approved qualification and must comply with all local codes.
- An alternate source for electricity supply (i.e. power supply circuit) is recommended to keep up the monitoring operation during any form of accidental power outage.
- Please ensure the camera mount takes place at a position or area which can withstand the camera weight before its installation.



- Ensure the electricity range of voltage for supplying power to the camera is compatible.
- Prevent any possibility of dropping the camera while carrying or handling it with care.
- Keep the sensor module away from contacts with bare hands.
- The camera lens could be seriously damaged by intentionally focusing at glaring light source such as sunlight or incandescent light bulbs.
- For proper protection, please keep the camera away from environments where laser equipment is near. For it may also cause damage of the sensor within the camera.
- Keep the environment temperature between -40°C to +60°C.
- Avoid any exposure to high electromagnetic radiation.
- To avoid the risk of fire or electric shock, do not expose this product to rain or moisture.

#### Maintenance

- While the camera is being assembled for operation and maintenance, the operator must follow the requirements of the IEC 60079-14: latest version Explosive atmosphere- Part 14: Electrical installation design, selection and erection, beside of the manufacturer's operation instruction or its National equivalent.
- External surfaces are to be routinely cleaned to prevent accumulation of dust layers.
- Ventilation of the camera is required to be kept clean and dust-free, to prevent heat accumulation.
- Cap the camera lens for keeping its sensor away from dirt if the camera is not occupied in monitoring operation.

#### **Product Repair Service (RMA)**

Please make your RMA request by directly contacting our sales representative regarding any product failure or warranty problem. We will process our repair service and a report will follow once we receive the product within 7 days.

#### **Repair Service Report Center**

HUNT ELECTRONIC CO., LTD.

22183 9F., No.171, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan.

Tel: +886-2-8692-7999



# **Product Specifications**

#### **Main Features:**

- Certification for use in Zones 1 and 2 IIC T6 Group(Gas) and Zones 21 and 22 IIIC T85°C Group (Dust)
- 1080P@30FPS
- 4.2x Bulid-in Zoom Lens
- H.264+/ H.264/ M-JPEG Video Compression
- Smart Focus System for Remote Focus Adjustment
- Power over Ethernet
- IR Cut Filter Mechanism
- Day & Night Manual Switch Time Control
- Smart Stream
- ROI Function
- IP68, IP69
- NEMA 4X
- Support iPhone/Android/Mac
- SDK for Software Integration
- Free Bundle 36 Ch Recording Software

Certification	Mark	
ATEX	😉 II 2G Ex db IIC T6 Gb	
ATEX	II 2D Ex tb IIIC T85°C Db	
IECEx	Ex db IIC T6 Gb	
IECEx	Ex tb IIIC T85°C Db	
<b>Explosion Proof</b>		
Housing Material	AISI 316L Stainless Steel	
Hardware		
CPU	Multimedia SoC	
RAM	512MB	
Flash	32MB	



Image Sensor	1 / 2.8" Megapixel CMOS Sensor
Sensitivity	Color : 0.005 Lux (AGC ON) B / W : 0.001 Lux (AGC ON)
Lens Type	2.8-12mm 4.2x Bulid-in Zoom Lens @ F1.4
View Angle	36~98°(H), 19.7~52.3 °(V)
Power over Ethernet	Yes
Power Consumption	PoE Max: 2.88 W
·	DC 12V Max : 2.28W
ICR	IR cut Filter Mechanism
Operating Temperature	-40°C ~ 70°C
Dimensions	95mm (∅) x 145mm(H)
Enclosure Certificate	IP68, IP69, IK10
Alarm In/Out	1DI / 1DO
Sunshield	Yes
Wide Dynamic Range	120dB
	G.711(64K) and G.726(32K,24K) audio compression
Audio	Input : 3.5mm phone jack
Addio	Output: 3.5mm phone jack
	Support 2-way.
RS485	1
Cable Length	4M
Weight	3.8kg
Micro SD Card Manager	ment
Local Storage	Industrial 64 GB Micro SD card built in (optional)
Recording Trigger	Motion Detection, IP check, Network break down (wire only), Schedule, DI
Video Format	AVI , JPEG
Video Playback	Yes
Delete Files	Yes
Network	100
Ethernet	10/ 100 Base-T
	IPv6, IPv4, HTTP, HTTPS, SNMP, SSL, TLS, DNS,
Network Protocol	ICMP, IGMP, ARP, SNTP, QoS/DSCP, Access list,
	IEEE 802.1X, RTSP/RTP/RTCP, TCP/IP, UDP, SMTP,
	FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP,
	SAMBA, Bonjour
System	
Video Resolution[16:9]	1920x1080@30fps,1280x720@30fps, 640x360@30fps



Video Adjust	Brightness, Contrast, Hue, Saturation, Sharpness, AGC, Night Mode, Flip, Mirror, Noise Reduction, Day&Night Adjustable	
Quadruple Streaming	Yes	
Image Snapshot	Yes	
Full Screen Monitoring	Yes	
Privacy Mask	Yes, 3 different areas	
Compression Format	H.264+/ H.264/ M-JPEG	
Video Bitrates Adjust	CBR, VBR	
Motion Detection	Yes, 10 different areas	
Triggered Action	Mail , FTP , SAMBA , Dropbox , Google Drive	
	Password protection, IP address filtering, HTTPS	
Security	encrypted data transmission, 802.1X port-based	
	authentication for network protection, QoS/DSCP	
Firmware Upgrade	HTTP mode, can be upgraded remotely	
Simultaneous	Up to 10	
Connection		
Focus Mode	Auto, Manual	
Web Browsing Requirement		
OS	Windows 7, 8, 10, XP, Microsoft IE 6.0 or above	
Mobile Support	iOS 8 or above, Android 4.0.4 or above.	
Hardware Suggested	Intel Dual Core 2.8G,RAM, 4GB, Graphic card: 128MB	
Feature		
ONVIF	Profile S	
Digital Zoom	16X	
Image Enhancement	T-WDR, BLC, 3D-DNR, De-fog	

<sup>\*</sup>SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION.



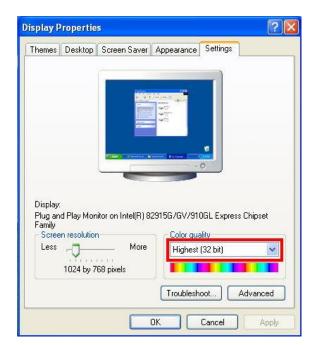
## **Monitor Settings**

Caution: This setting only applies to Windows 7 system users.

Right-Click on the desktop. Select Properties



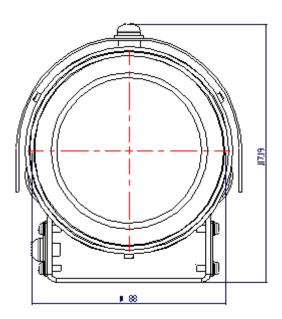
Change color quality to highest (32bit).

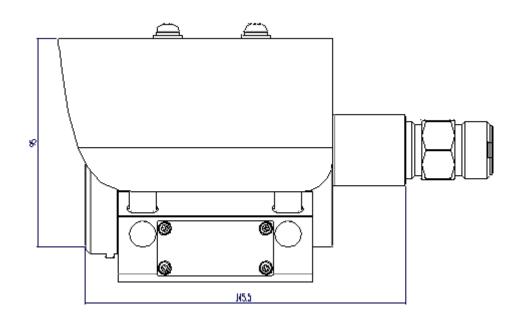




# **Hardware Installation**

#### **Camera Without Bracket**

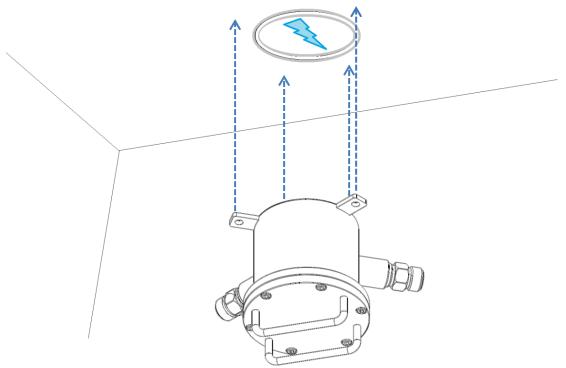




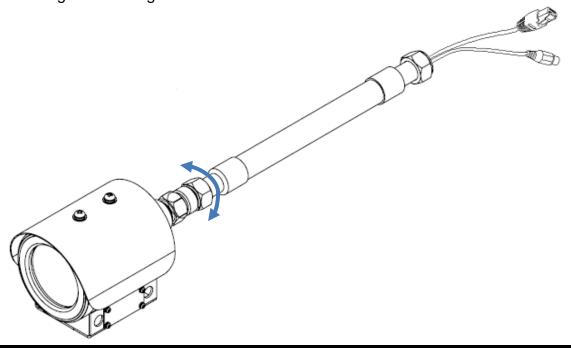


#### 1. Camera With Bracket: Installation Steps

**A.** Mount the **Junction Box** on top of where the power socket and internet outlet are. Make consideration for this process in relation of setting up a functional surveillance site.

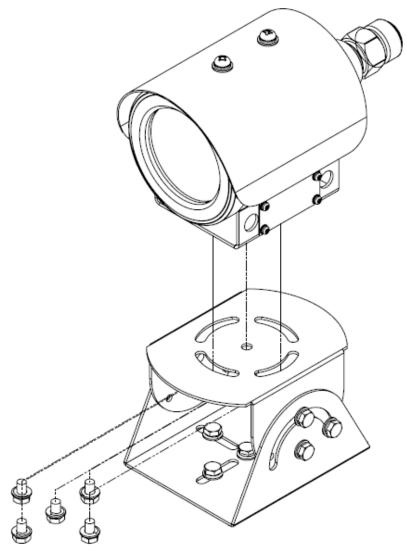


**B.** Pull the cables of the camera through **winding tube**, and then join & tighten the lug nut unto the thread of the camera.

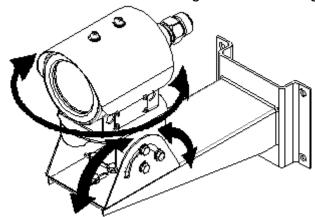




**C.** Install the **mount base** of the camera unto the **pedestal bracket** with washers and screws.

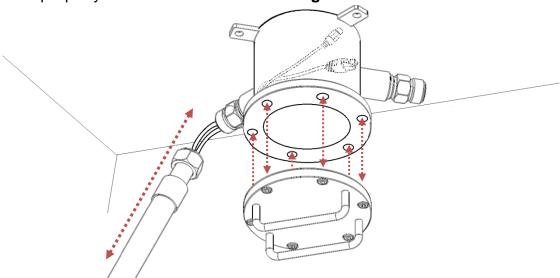


**D.** Adjust the tilting position and the panning angles for the **pedestal bracket** and the **camera base** for manageable monitoring performance.

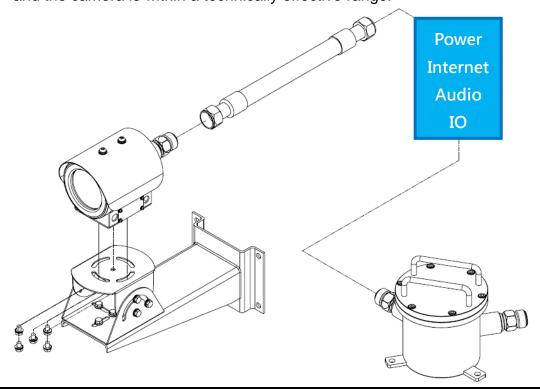




E. Take the lid off the junction box with screwdriver first to allow any physical contact with the power socket and internet outlet. Grab the cables out of the winding tube into the thread from the junction box inside (sort out the cables if necessary). Finally, use screwdriver to close & seal the lid of the junction box right after it is properly assembled with the winding tube.



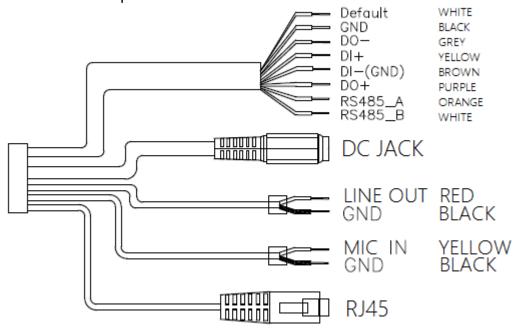
**F.** It is crucial to erect the camera where observation angles are efficient, and please ensure the distance which the cables make between outlets and the camera is within a technically effective range.





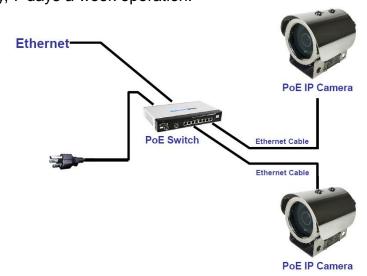
#### 2. Connector Instruction

Connect power adaptor first then the IP Camera to PC or network, and set up the network configurations according to the network environment. Please refer to User Manual: <a href="Manual:1/O Configuration">I/O Configuration</a> chapter for more descriptions.



#### 3. PoE (Power Over Ethernet) (Optional) 60W PoE single port recommended

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It provides power for a network device, such as a network camera using the same cable for network connection which eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.





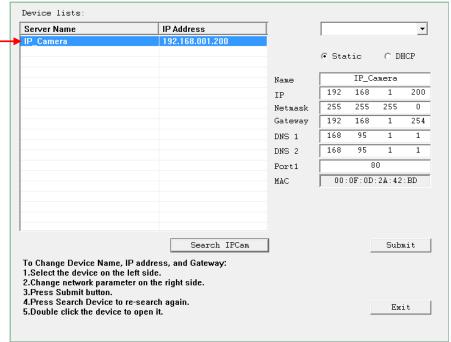
## **IP Assignment**

- i. Open the software IP Scanner to assign the IP address of the IP Camera. Find this software in the Applications folder in the software CD attached to the product's package.
- ii. IP Scanner supports two languages: This manual is for English version.
- iii. There are 3 kinds of IP configuration.
  - a. Fixed IP (Public IP or Virtual IP)
  - **b.** DHCP (Dynamic IP)
  - c. Dial-up (PPPoE)
- iv. Execute the English version of IP Scanner: IPScannerENG
- v. For Windows XP SP2 or above, a Windows Security Alert may pop up. Choose the network type based on your surveillance environment, and click on <u>Allow</u> <u>access</u>.

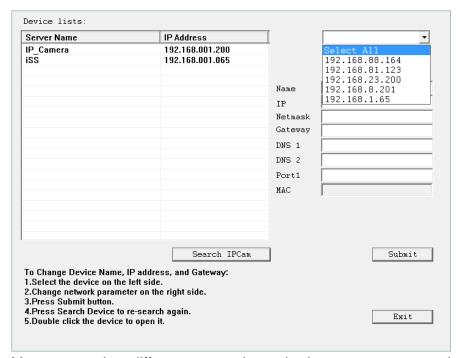




vi. IP Scanner will search for all the IP Cameras connected on the LAN. The user can click Search IPCam to search again.



Click one of the IP Cameras listed on the left side. The network configuration of this IP camera will be shown on the right side once you highlight the device with your mouse. You can change the **name** of the IP Camera to your preference (e.g.: Office, warehouse). Change the parameters and click **Submit**.



You can assign different network cards that you are currently connected to from the drop-down menu at the top right corner.



Select the online device from a specific network card in **Device lists**, or choose **Select All** to include all network card devices in **Device lists**.

vii. Please make sure the subnet of the PC IP address and the IP Camera IP address are the same.

The same Subnet Different Subnets

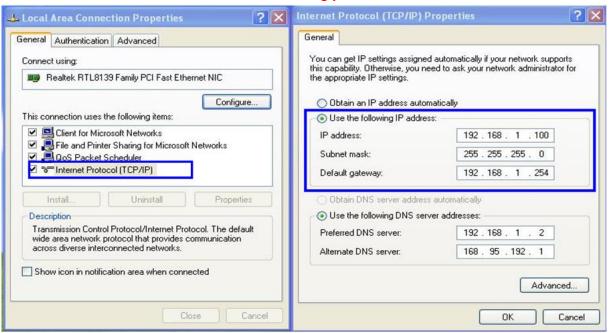
IP Camera IP address: <u>192.168.1</u>.200 IP Camera IP address: <u>192.168.2</u>.200

PC IP address: <u>192.168.1</u>.100 PC IP address: <u>192.168.1</u>.100

#### To Change the PC IP address

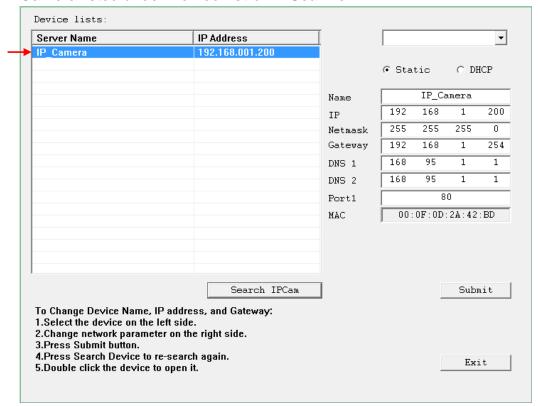
Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties

Make sure your IP Camera and PC are in the same Subnet. If not, change the IP Camera subnet or the PC IP subnet accordingly below.





viii. To quickly access remote monitoring, left-click the mouse twice on the selected IP Camera listed under **Device list** of **IP Scanner**.



ix. A default network browser of the camera control interface will open. Enter admin for both Username and Password to gain access.





### **Install ActiveX Control**

#### 1. For users using IE 6.0 or above:

When viewing the camera video for the first time via IE, the browser will ask you to install the **ActiveX** component.

#### Choose 'Allow'



The ActiveX component should then be completed and user will be able to view the live video screen.

If the installation fails, please check the security settings in the IE browser. Follow the steps below:

- 1) Go to **Start-Up Menu** on the lower left corner of the **Windows**
- 2) Select Control Panel

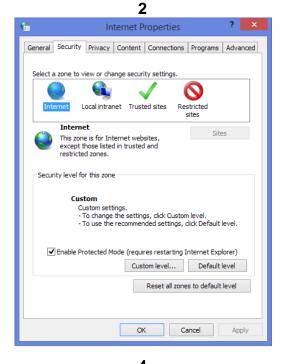


3) Double-click on Internet Options

- 4) You will then enter the page of **Internet Properties** settings.
- 5) Starting from Internet Properties, proceeding step A and B:
  - A. Security → Custom Level → Security Settings → Download unsigned ActiveX controls → Enable or Prompt (recommended).
  - **B.** Security → Custom Level → Security Settings → Initialize and script ActiveX controls not marked as safe → Enable or Prompt (recommended).

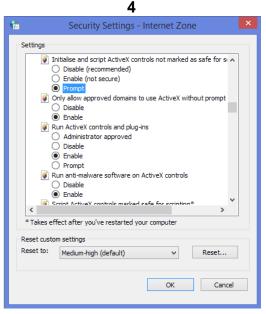


1 Internet Properties General Security Privacy Content Connections Programs Advanced Home page To create home page tabs, type each address on its own line. Use current Use default Use new tab Start with tabs from the last session Start with home page Tabs Change how webpages are displayed in tabs. Tabs Delete temporary files, history, cookies, saved passwords and web ✓ Delete browsing history on exit Delete... Settings Colours Languages Fonts Accessibility Cancel Apply OK

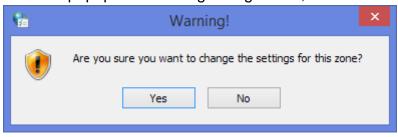


3 8 Security Settings - Internet Zone i Display video and animation on a webpage that does not use ▲ DisableEnable Download signed ActiveX controls O Disable Enable (not secure) Prompt (recommended) Download unsigned ActiveX controls Disable (recommended) Enable (not secure) Prompt Disable (recommended) O Enable (not secure) Prompt \* Takes effect after you've restarted your computer Reset custom settings Reset to: Medium-high (default) 

Reset... OK Cancel



When popup the following dialogue box, click **Yes**.

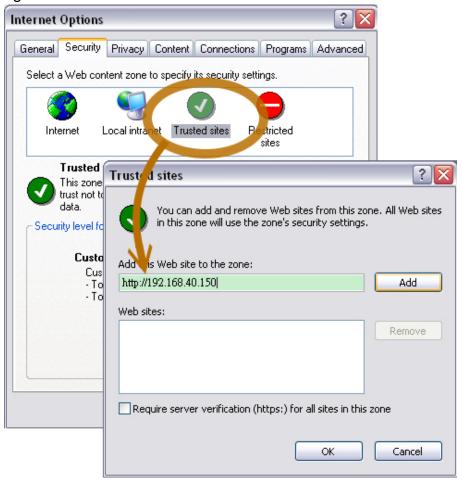




#### 2. You can choose another method:

**Go to:** IE $\rightarrow$ Tools  $\rightarrow$  Internet Options...  $\rightarrow$  Security Tab  $\rightarrow$  Trusted sites  $\rightarrow$  Add the IP address and click **OK**.

In the site list you can key in one single IP address or a LAN address. For example, if you add **192.168.21.\***, all the IP address under **21.\*** on the LAN will be regarded as trusted sites.



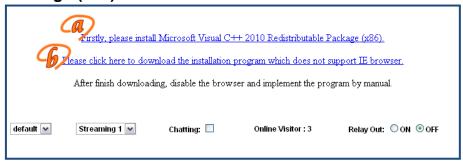
#### 3. For Non-IE Web Browser Users

If you use Firefox or Google chrome to access the IP camera but fails to watch the live video, please follow the steps to install necessary tools: (The following pictures are based on chrome.)

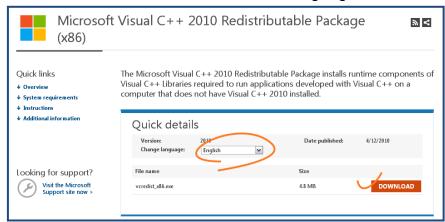
**A.** You may see the prompt message as the picture below. Click the **a** link:



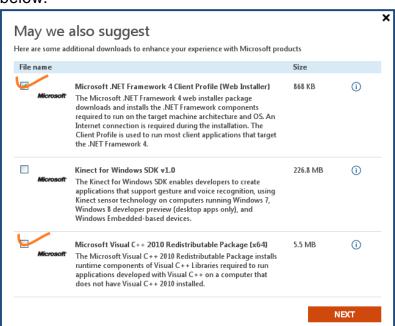
## Firstly, please install Microsoft Visual C++ 2010 Redistributable Package (x86).



The link will conduct you to the Microsoft official site where you can download the tools. Please select the language and click **download**.



In the pop-up window, please tick the first and the third file as the picture below.





Click Next to download both Microsoft .NET Framework 4 Client Profile (Web Installer) and Microsoft Visual C++ 2010 Redistributable Package (x64).

After finishing downloading, execute the two files respectively to install them. The windows may ask you to reboot the PC when the installation is finished.



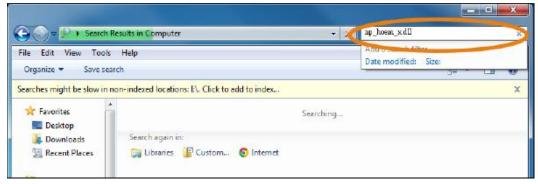
B. Then, click the second link Please click here to download the installation program which does not support IE browser to download Setup ActiveX.



After finishing downloading, execute the files to install **ActiveX**. Then restart the browser.

**C.** If you execute the steps above but still cannot see live video normally, please try the following solution:

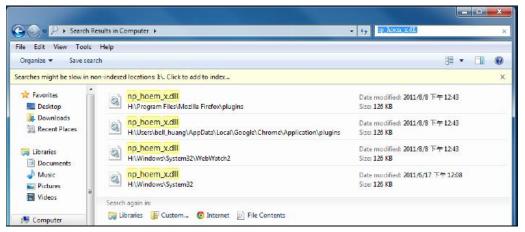
Search for the file  $np\_hoem\_x.dll$  in your system disk. For Windows XP users, please go to  $Start \rightarrow Search \rightarrow Search$  for All files and folders and key-in  $np\_hoem\_x.dll$ . For Windows 7 users, please use the search bar on the top-right of the Windows Explorer.



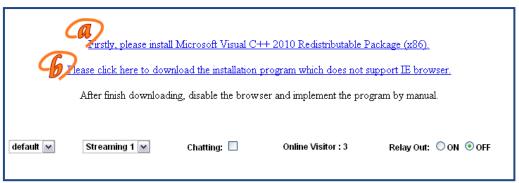
Delete all the files named **np\_hoem\_x.dll**. They're the **ActiveX** control tools installed in your computer, but the old version of **ActiveX** might not be compatible with the new version of the browser.



Therefore, they need to be deleted in order to install the latest **ActiveX** control.



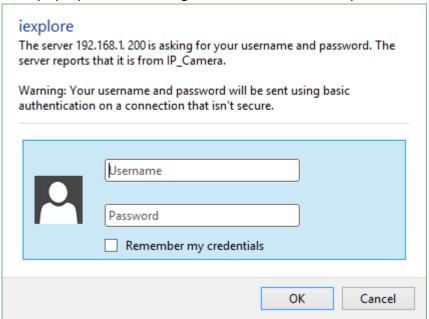
Start your web browser, and repeat the step A: Download the installation program which does not support IE browser to download and install ActiveX.





## **Live Video**

Start an IE browser, input IP address of the IP camera in the address field. A dialogue box will pop up as below. Log in with username and password using **admin**.



When IP Camera is successfully connected it shows the following interface.



**Full Screen Mode:** Double-clicking on the video screen will enter the full screen mode. Press "Esc" on your computer keyboard or double-click the video screen again for returning to normal screen mode.



Please change default password is a sign which flickers on the live view screen as a reminder, to suggest the user to change the default password. You may configure the login settings in <a href="System">System</a> to secure your account privacy.

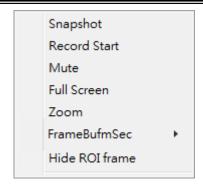
#### A. Live Video Panel

- 1. Click Get into the administration page.
- 2. Click A snapshot preview window will appear. Choose to save the current snapshot or choose to discard it.
- 3. Show the system time, video resolution, and other information.
- **4.** default ✓ Adjust image size by its ratio of 1/2x(default), 1x, and 2x.
- 5. Streaming 1 Select the video streaming source: If the streaming 2 is set closed in Video Setting, this function will not be displayed.



- **6.** Tick on **Chatting** checkbox to enable two-way audio. You may adjust settings from <u>Audio Setting</u>.
- 7. Online Visitor: Shows how many people are connected to this device.
- 8. Click on icons to adjust Zoom In / Zoom Out.
- 9. Focus: Click on icons to adjust focus.
- **10.Auto Focus:** Click on icon to automatically adjust focus.
- 11. Home: Click to view without adjustments through Focus & Zoom.
- **12.Speed:** Set the zoom speed.
- **13.**Control the external output device or DO (digital output) connected to this camera.
- **B. Submenu:** Right-Click the mouse on the live video screen, a pop-up menu will then appear as below.

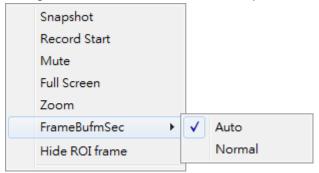




- 1. Snapshot: Save a JPEG picture
- 2. <u>Record Start</u>: Record the video to the local PC. The video format is AVI and you will be asked to set up the directory for the video file. To stop recording, right-click again. Select "Record Stop".
- 3. Mute: Click to turn off the audio. Click again to turn it on.
- 4. Full Screen: Full-screen mode.
- **5. Zoom**: Select "zoom" within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



**6.** <u>Frame Buffm Sec</u>: This function aims to build a temporary buffer to accumulate several video frames in a LAN network environment. It can make video streaming smooth when the network speed is slow.

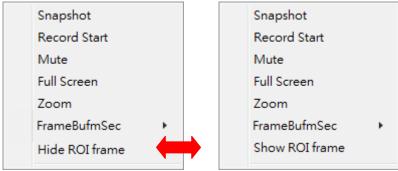


Select **Auto** to allow this function automatically help fix the streaming performance whenever the video happens to be lagging.



Select **Normal** to play the video data based on the current network streaming performance. (Note: the lagging of the video displayed will not be seen as a result of the actual video data)

7. <u>Hide / Show ROI frame</u>: Once the ROI frame has been set up from <u>AV Settings</u>, there will be frames in colors appearing on the live view. Choose to hide to make the frames invisible, or choose show to keep the frames.





## **System**

Click to get into the administration page. Click live video page.



to go back to the

System Information Server Information MAC Address: 00:0F:0D:28:92:B0 System ☐ Status Bar IP\_Camera English ○ 繁體中文 ○ 简体中文 OFrench O Italian O Spanish O German IP Setting O Portuguese O Pollah O Japanese OSD Setting Time Stamp: Canabled Disabled Text: OSD\_Display Text Edit Network Time Setting Server Time: 2018/1/12 0:26:04 Time Zone: GMT+08:00 Date Format: ● yy/mm/dd ○ mm/dd/yy ○ dd/mm/yy GMT+08:00 Time Zone: ☐ Enable Daylight Saving: O NTP: pool.ntp.org V Hour Minutes [-1440..1440] Update : A/V Setting Time Shift: O Synchronize with PC's time Date: 2018/4/11 Event Setting Time: 15:46:54 O Manual 2018/4/11 Date: 15:46:51 The date and time remain the same Apply Event



#### I. System Information

#### A. Server Information

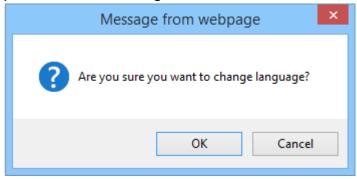
Set up the camera name, language, and the camera time.



a. <u>Server Name:</u> This is the Camera name. This name will be shown on the IP Scanner. Tick the checkbox of **Status Bar** to display the **Server Name** in <u>live video</u>. For example, if you key in DEMO, it will be displayed at live video mode at the bottom.

DEMO SEP/17/2018 13:52:25 H.264+ Size:3840×2160

**b.** <u>Language:</u> English and other languages can be selected. When a language preference is selected, the following dialogue box will pop up to confirm the change.



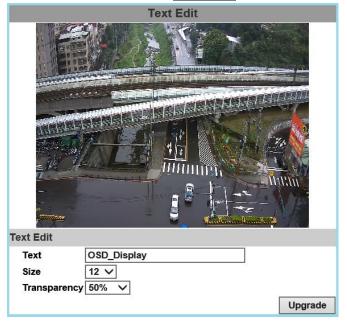
#### B. OSD Setting

You can adjust the **Position** for the **Enabled** option of **Time Stamp** or **Text** which will be displayed on <u>live video</u> screen.



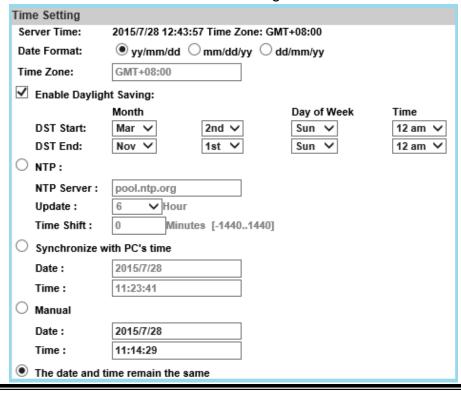


Click **Text Edit** for editing the OSD content, including text size and transparency. Click the Upgrade button to apply the settings.



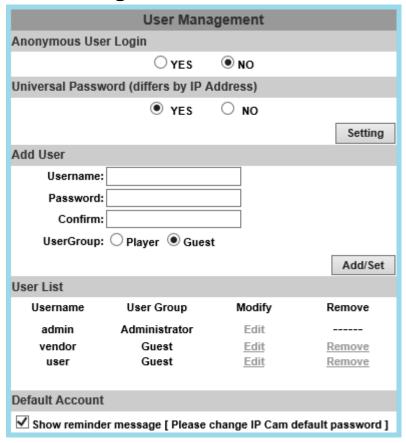
#### C. Time Setting

Select between NTP, Synchronize with PC's time, Manual, The date and time remain the same for setting the server time.





#### II. User Management



#### A. Anonymous User Login

Select **Yes** for allowing access to watch live video of the IP camera without having to enter username and password. Yet when entering the configuration page of the IP camera, the system will do otherwise. Select **No** for requiring a username and login to access the camera.

#### B. <u>Universal Password</u>

Select **Yes** for allowing login to this IP camera by universal password. Please refer to **Universal Password** chapter for more explanations. Select **No** for disabling universal password.

#### C. Add User

The IP Camera supports 2 different users: **Administrator** and **Guest**. **Administrator** can operate everything. **Guest** can have the right to access the <u>Live view</u>, Time sync, location setting, playback viewing and check playlist.



#### D. User List

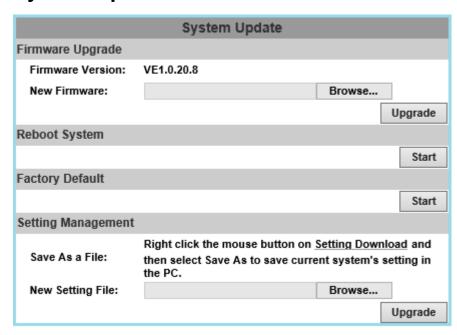
Type the user name and password, then click **Add/Set**. The guest user can only browse live video page and is not allowed to enter the configuration page. Click **Edit** or **Remove** in the user list to modify them.

The system will ask you to input the password in the pop-up window before you edit the user information.

#### E. Default Account

Please change default password is a sign which appears on the live view screen as a reminder, suggesting the user to change the default password. Click the checkbox to enable/disable the the reminder message.

#### III. System Update



- A. <u>Firmware Upgrade</u>: To update the firmware online, click Browse... to select the firmware. Then click **Upgrade** to proceed.
- B. Reboot System: re-start the IP camera



- C. Factory Default: delete all the settings of this IP camera.
- **D.** <u>Setting Management</u>: The user can download the current settings to PC, or upgrade from previous saved settings.

## a. Setting Download

Right-click the mouse button on **Setting Download**  $\rightarrow$  Select **Save AS...** to save current IP Camera settings in PC  $\rightarrow$  Select saving directory  $\rightarrow$  Save

# b. New Setting File

To upgrade new settings, click **Browse** to search previous settings from a pop-up window, then click **Open** → **Upgrade** → Settings update confirm. Finally, click **index.html**. to returning to main page.



# Network

Click to get into the administration page. Click live video page.



to go back to the



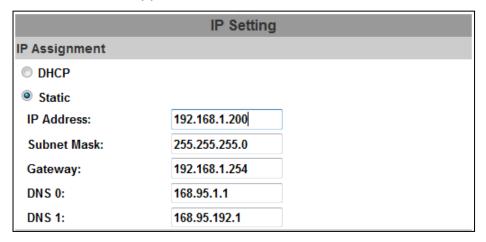
Enter the **Network** by clicking on titles from **IP Setting**, **Advanced**, **PPPoE & DDNS** and **Server Settings**.



# I. IP Settings

#### A. IP Assignment

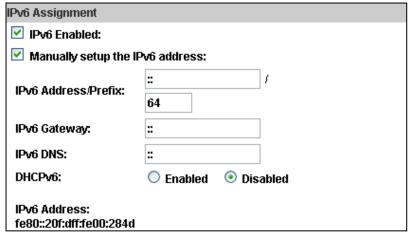
The IP Camera supports DHCP and static IP.



- **a.** DHCP: The IP Camera will get all the network parameters automatically.
- **b.** Static IP: Type-in the IP address subnet mask, gateway, and DNS.

#### **B. IPv6 Assignment**

By enabling DHCPv6 you can configure the following IPv6 address settings:



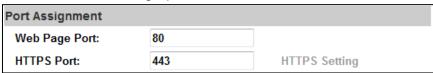
- Manually setup the IPv6 address: Key-in the Address, Gateway, and DNS.
- <u>DHCPv6:</u> If you have a DHCPv6 server, enable it to assign the IPv6 automatically. The assigned IP address will be displayed beside the column.
- Automatically generated IPv6 Address: Indicates a virtual IPv6 address generated automatically by the IP camera. This virtual IPv6 address cannot be used on WAN.



To use IPv6 address to access the IP camera, open the web browser, and key-in the **[IPv6 address]** in the address bar. The [] parentheses mark is necessary.

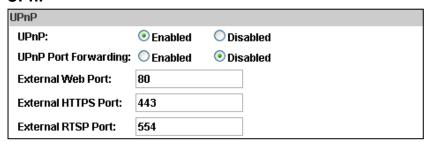


**a.** Port Assignment: The user might need to assign a different port to avoid conflicts when setting up the IP.



- **b.** Web Page Port: setup the web page connecting port and video transmitting port (Default: 80)
- **c.** HTTPs Port: setup the https port(Default: 443)

#### C. UPnP



This IP camera supports UPnP, if this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to **My Network Places**.

<u>UPnP Port Forwarding</u>: Enable UPnP Port Forwarding for accessing the IP Camera from the Internet; this option allows the IP Camera to open ports on the router automatically so that video streams can be sent out from a LAN. There are three external ports for being set: **Web Port**, **Http Port** and **RTSP** port. To utilize of this feature, make sure that your router supports **UPnP** and is activated.

**Note:** UPnP must be enabled on your computer.

Please follow the procedure to activate UPnP:

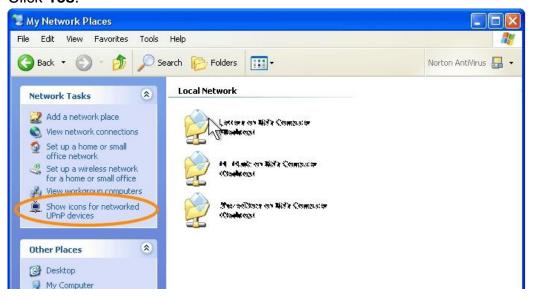


#### <Approach 1>

- a. open the Control Panel from the Start Menu
- b. Select Add/Remove Programs
- c. Select Add/Remove Windows Components and open Networking Services section
- **d.** Click **Details** and select **UPnP** to setup the service.
- e. The IP device icon will be added to My Network Places.
- f. The user may double click the IP device icon to access IE browser

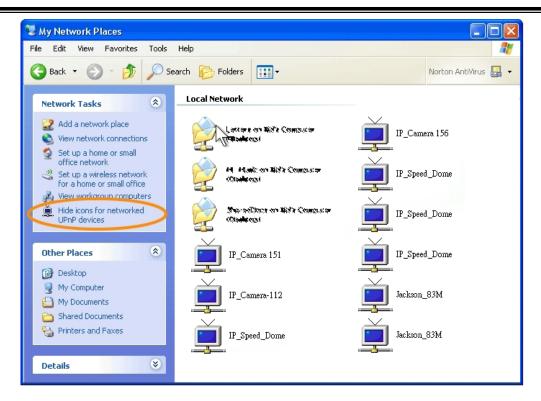
#### <Approach 2>

- a. Open My Network Space
- **b.** Click **Show icons for networked UPnP devices** in the tasks column on the left of the page.
- **c.** Windows might ask your confirmation for enabling the components. Click **Yes**.

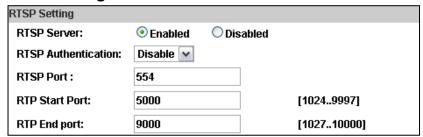


d. Now the IP device is displayed under the LAN. Double-click the icon to access the camera via web browser. To disable the UPnP, click Hide icons for networked UPnP devices in the tasks column.





#### D. RTSP setting



If you have a media player that supports RTSP protocol, you can use it to receive video streaming from the IP camera. The RTSP address can be set for two streaming transmissions respectively.

#### a. RTSP Server: enable or disable

**Disable** means everyone who knows your camera IP Address can link to your camera via RTSP. No username and password are required. Under **Basic** and **Digest** authentication mode, the camera asks for a username and password before allows access.

The password is transmitted as a clear text under basic mode, which provides a lower level of security than under **digest** mode.

Make sure your media player supports the authentication schemes.

# **b.** RTSP Port: setup port for RTSP transmitting (Default: 554)



c. <u>RTP Start and End Port:</u> in RTSP mode, you can use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

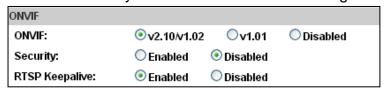
# E. Multicast Setting (Based on the RTSP Server)

Multicast Setting (Based on the RTSP Server)				
Streaming 1:				
IP Address:	234.5.6.78	[224.3.1.0 ~ 239.255.255.255]		
Port:	6000	[1 ~ 65535]		
TTL:	15	[1 ~ 255]		
Streaming 2:				
IP Address:	234.5.6.79	[224.3.1.0 ~ 239.255.255.255]		
Port:	6001	[1 ~ 65535]		
TTL:	15	[1 ~ 255]		

Multicast is a bandwidth conservation technology. This function allows several users to share the same packet sent from the IP camera.

For using Multicast, appoint here an IP Address and port. TTL means the life time of packet, the larger the value is, the more users can receive the packet. For using Multicast, be sure to enable the function **Force Multicast RTP via RTSP** in your media player. Then key in the RTSP path of your camera: **rtsp**://(IP address)/ to receive the multicast.

F. ONVIF: Choose your ONVIF version and settings.



- a. <u>ONVIF</u>: Under ONVIF connection, the video will be transmitted by RTSP. Be sure to enable the RTSP server in IP setting, otherwise the IP Camera will not be able to receive the video via ONVIF.
- **b.** <u>Security</u>: By selecting **Disable**, the username and password are not required for accessing the camera via ONVIF. By selecting **Enable** the username and password are necessary.
- **c.** RTSP Keepalive: When the function is enabled, the camera checks once in a while if the user who is connected to the camera via ONVIF is still connected. If the connection has been broken the camera will stop transmitting video to the user.

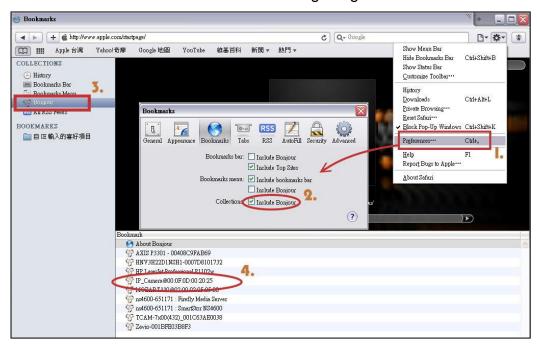


# G. Bonjour

Bonjour		
Bonjour:	Enabled	Disabled
Bonjour Name:	IP_Camera	@00:0F:0D:00:28:4D

This function allows Apple systems to connect to this IP camera. On **Bonjour Name** key-in the name here. The web browser **Safari** also has a Bonjour function. Tick **Include Bonjour** in the bookmark setting, for the IP camera to appear under the bonjour category.

Click the icon to connect to the IP camera. The Bonjour function on Safari browser doesn't support HTTPS protocol. If on the camera you select **https**, the camera will appear on Safari's bookmarks but it cannot be accessed. Take as a reference the following image:



#### H. LLTD

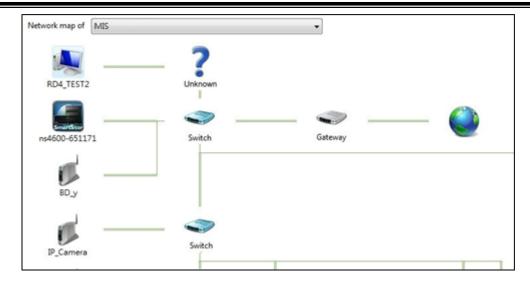


If your PC supports LLTD, enable this function for allowing checking the connection status, properties, and device location (IP address) in the network map.

If the computer is running Windows Vista or Windows 7, you can find LLTD through the path:

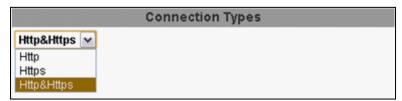
Control Panel  $\rightarrow$  Network and Internet  $\rightarrow$  Network and Sharing Center  $\rightarrow$  Click **See full map**.





#### II. Advanced

**A.** Https (Hypertext Transfer Protocol Secure): When the users access cameras via Https protocol, the transmitted information will be encrypted, increasing the security level.



Select the connection type:

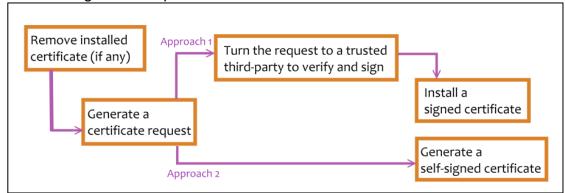
- <u>Http:</u> the user can access the camera via the Http path but cannot access it via the Https path.
- <u>Https:</u> the user can access the camera via the Https path but cannot access it via the Http path.
- Http & Https: Both the Http and Https path can be used to access the camera. When you change the connection type settings, it may cause connection error or disconnection error if you switch the protocol directly. Therefore, Http & Https mode is necessary.

If you want to change from Http to Https, please switch to **Http & Https** mode first, and then switch to **Https** mode and vice versa.

The Https protocol has a verifying mechanism. When the user access a website via Https, the browser will check the certificate of that domain and verify its trustiness and security.



#### Certificate generation process:



 Remove the existing certificate: Before you generate a new certificate, please remove the installed one. Select the Http connection type and click Remove. If a dialog box pops up to ask you to confirm, click Yes.

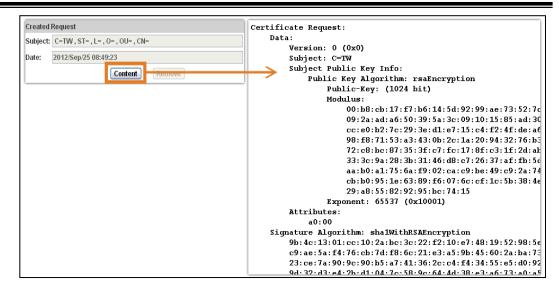


<u>Created Request:</u> Fill-in the following form and click apply.



 After generating a certificate request, if you choose to turn it & verify it by a trusted third-party, click Content and copy all the request content.





According to the certificate source, there are two ways to install the
certificate: If you had sent the certificate request for signing and receiving
a signed certificate, click browse and find the certificate file in your
computer. Click Apply to install it.

If you choose to generate a self-signed certificate, fill-in the following forms and set the validity day, click **Apply** to finish installed it.



After finishing the installation, click on **Content** to call out and check the certificate content.



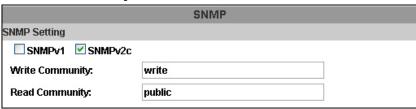


To use Https to access the camera, open your browser, and key-in https:// (IP address)/ in the address bar. Now your data will be transmitted via encrypted communications. The browser will check your certificate status. It might show the following warning message:

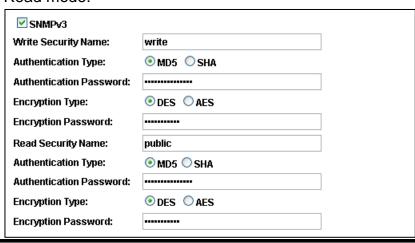


Meaning that certificate is self-signed or signed by a distrusted institution. Click **Proceed anyway** for continuing to the camera page.

- **B. SNMP (Simple Network Management Protocol)**
- a. SNMPv1 or SNMPv2: write the name of both Write Community and Read Community.



**b. SNMPv3:** Set the Security Name, Authentication Type, Authentication Password, Encryption Type, Encryption Password of Write mode and Read mode.

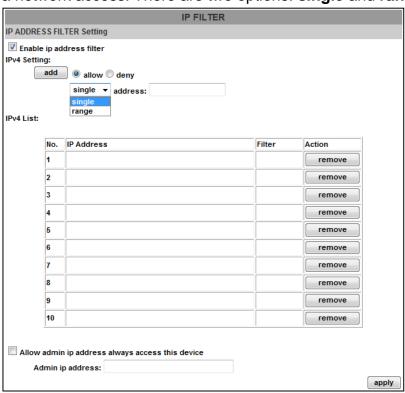




Enable **SNMPv1/SNMPv2 Trap** for detecting the Trap server. Please set what event needs to be detected.

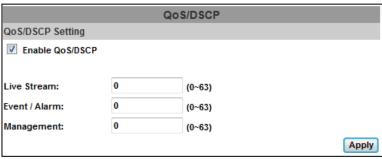


- Cold Start: The camera starts up or reboots.
- Setting changed: The SNMP settings have been changed.
- <u>Network Disconnected:</u> The network connection was broken down (The camera will send trap messages after the network is connected again).
- <u>V3 Authentication Failed:</u> A SNMPv3 user account tries to get authentication but failed. (Due to incorrect password or community)
- SD Insert / Remove: A Micro SD card is inserted or removed.
- **c.** Access list: Enable IP address filter to allow/reject some IP address a network access. There are two options: **single** and **range**.

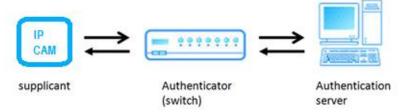




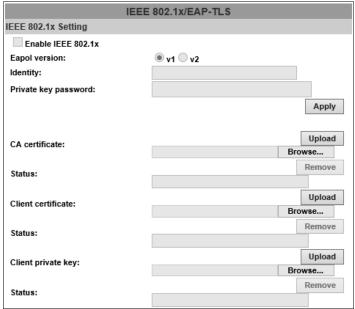
d. QoS/DSCP(Quality of Server/Differentiated Services Code-point): DSCP specifies a simple mechanism for classifying and managing network traffic; and provide QoS on IP networks. DSCP is a 6-bit in the IP header for packet classification purpose. Please define it for Live Stream, Event / Alarm and Management.



e. IEEE 802.1x: It is an IEEE standard for port-based Network Access Control. It provides an authentication mechanism to a device on LAN/WLAN. The EAPOL protocol supports service identification and optional point to point encryption over the local LAN segment.



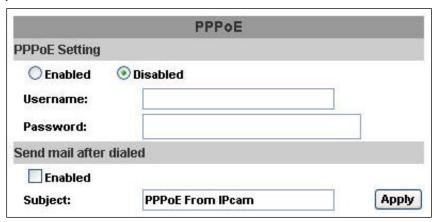
Please check what version supports the authenticator and authentication server. This camera supports EAP-TLS method. Enter the ID, password issued by the CA, then upload related certificates.





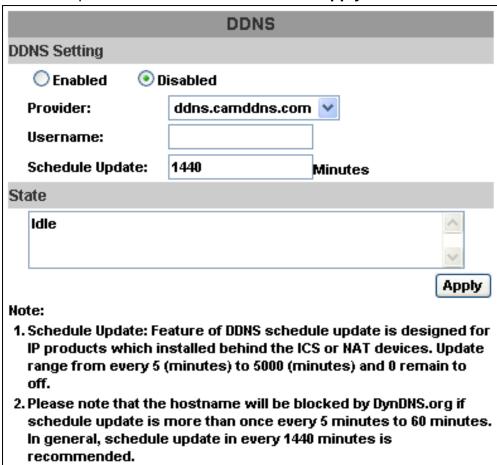
#### III. PPPoE & DDNS

**A. PPPoE:** Select **Enabled** to use PPPoE. Key-in the Username and password for ADSL connection.



<u>Send mail after dialed:</u> When connected to the internet, the camera will send a mail to a specific mail account.

**B. DDNS (camddns example):** Enable this service→Input username→IP schedule update→Default: 5 minutes→Click **Apply** 





#### **DDNS Status**

(1) Updating: Information update

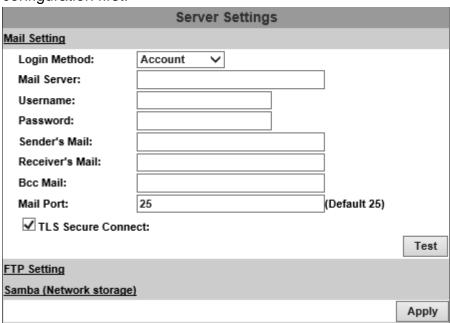
(2) Idle: Stop service

- (3) DDNS registration successful, can now log by <a href="http://<username>.ddns.camddns.com">http://<username>.ddns.camddns.com</a>: Register successfully.
- (4) Update Failed, the name is already registered: The user name has already been used. Please change it.
- (5) Update Failed; please check your internet connection: Network connection failed.
- (6) Update Failed, please check the account information you provided: The server, user name, and password may be wrong.

# IV. Server Settings

There are several server types available. Select the item to display detailed configuration options. You can configure either one or all of them.

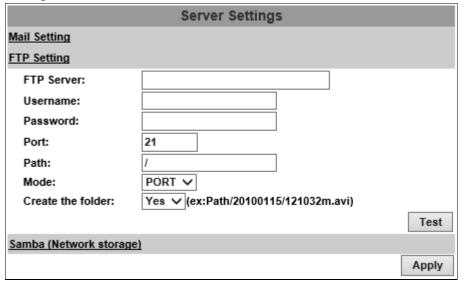
**A. Mail Setting:** To send out the video via mail of FTP, please set up the configuration first.





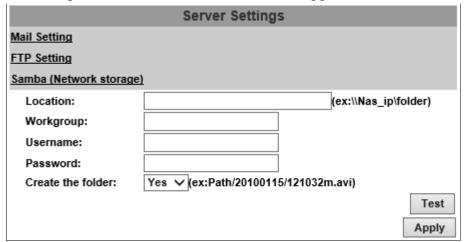
Click **Apply** to confirm settings at the bottom of **Server Settings**, then click **Test** icon to test the server connection.

**B. FTP Setting:** To send out the video via mail of FTP, please set up the configuration.



Click **Apply** to confirm settings at the bottom of **Server Settings**, then click **Test** icon to test the server connection.

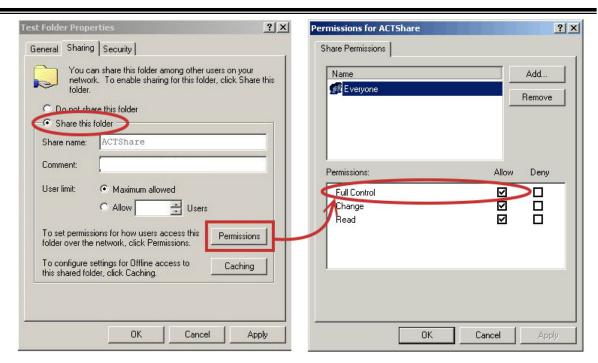
**C. Samba (Network Storage):** Select this option to send the media files via a neighbor network when an event is triggered.



Click **Apply** to confirm settings at the bottom of **Server Settings**, then click **Test** icon to test the server connection.

A message box will tell you **OK!** When you have confirmed each of the **Server Settings**, and a **Test** document will be created in the directory below.





If the testing fails, check the sharing setting of your location folder. The folder properties must be **shared** and the permissions must be **Full Control**.



# A / V Settings

Click to get into the administration page. Click to go back to the live video page.





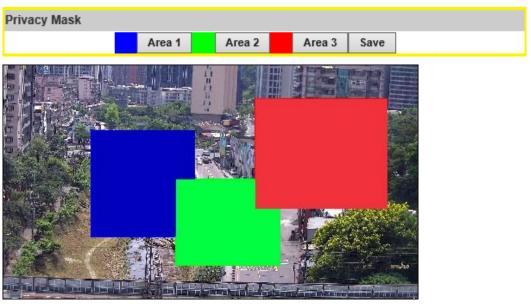
# 1. Image Setting

A. <u>Camera</u>: Previewing the result of the settings made in **Image Setting**.



Please refer to the details below for image settings:

**B.** <u>Privacy Mask</u>: An area on the monitoring screen can be masked as a block of particular color only in <u>live view</u> for security and privacy purposes, but will not be visible in the video recorded. You can create up to 3 privacy masks.



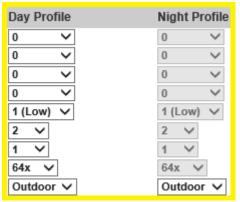
Click any **Area 1/2/3** button first, and then draw an area on the preview image screen with mouse. Click **Save** to apply settings and create the mask.



Discard the masked area previously set by clicking **Area 1/2/3** button again, and click **Save** to confirm.

# C. Image Setting

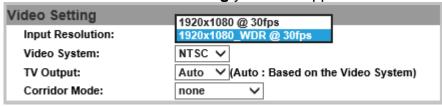
a. <u>Day Profile & Night Profile</u>: Settings can be adjusted under <u>Day Profile & Night Profile</u> drop-down lists. Activate them by enabling <u>Times Mode</u> from <u>Day & Night</u> and assign settings under each profile. The configurations from both <u>Day & Night Profiles</u> will be adjusted between daytime and nighttime.



b. <u>D-WDR</u> & <u>True-WDR</u>: Click Video Setting from A/V Setting menu first.



There are two types of **Image Setting** to switch from depending on what **Input Resolution** from **Video Setting** you have applied to the camera.



Click Apply to assign an input resolution for captured video files. Features vary in FPS (frames-per-second) and options will be modified in **Image Setting**.

#### Input Resolution without WDR feature=D-WDR

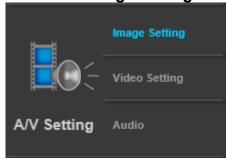




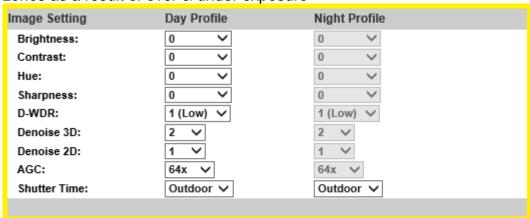
Input Resolution with WDR feature=True WDR

Video Setting	
Input Resolution:	1920x1080_WDR @ 30fps ∨

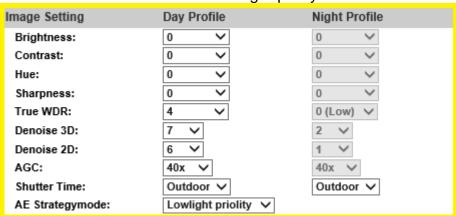
Go back to **Image Setting** where you can operate a different set of settings.



**D-WDR** enables the camera to reduce the contrast in the view to avoid dark zones as a result of over & under exposure



**True-WDR** enables the camera to combine the over & under exposures to smooth out dark zones for best image quality.



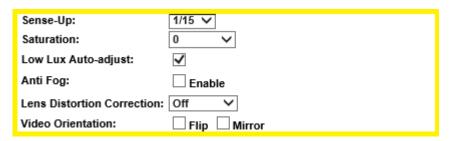
c. <u>Denoise 3D & 2D</u>: Filter the noise and blur from the image and show a clearer view. You can set the values for 3D & 2D filters.



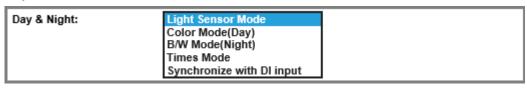
- d. <u>AGC</u>: The sensitivity of the camera can be adjusted according to its environmental lighting. Enable this function to get brighter images on low light, but the level of noise may also increase.
- **e. Shutter Time:** Choose the location of your camera or a fixed shutter time. The shorter the shutter time is the less light the camera receives and the image becomes darker.

**Note:** When you select a number in **Shutter Time**, the shutter time will vary in a range and be controlled by camera automatically. The following table shows the shutter time options and corresponding range.

f. <u>AE Strategymode</u>: Select Lowlight Priority or Highlight Priority to adjust the view in preference of lightening or darkening the contrast.

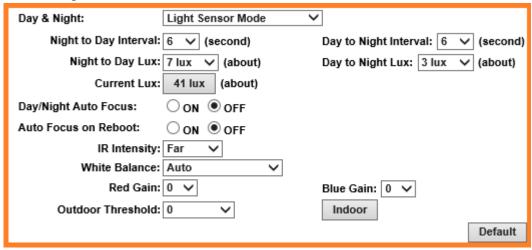


- g. <u>Sense-Up</u>: This function increases the sensitivity of camera to get brighter image at night. The smaller value you select, the slower shutter speed becomes so that the image will get brighter, and moving subjects might be blurred.
- **h. Saturation**: Adjust the saturation values here.
- i. <u>Low Lux Auto-adjust</u>: Click to enable the camera to adjust its low lux level automatically in different lighting environments.
- **j.** Anti Fog: Improve the image clarity on environments presenting high levels of fog or smoke.
- **k. Video Orientation:** Flip or mirror the image.
- I. <u>Day & Night</u>: Select a mode from its drop-down menu and adjust the camera to detect the light level for different environments. Settings vary when modes are shifted. An extra sub-function may appear to be available after a setting is adjusted.





<u>Light Sensor Mode</u>: Automatically adjust itself depending on the light of the monitoring scene.

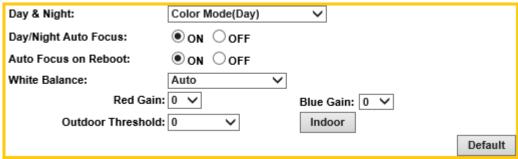


- ♦ Night to Day Interval & Day to Night Interval: Set up the duration of how long before the Day time shifts to Night time (or the other way around).
- ◆ Day to Night Lux & Night to Day Lux: Appoint desired lux values as a standard for switching Night to Day Interval & Day to Night Interval.
- ◆ Current Lux: Provided as a reference to adjust the Day to Night Lux & Night to Day Lux.
- ◆ **Day/Night Auto Focus:** Select ON to enable the camera to automatically adjust its focus to maintain a clear video image during the day / night time.
- ◆ Auto Focus on Reboot: Select ON to enable the camera to automatically execute the Day/Night adjustment after rebooting.
- ◆ IR Intensity: Adjust the IR intensity level from Far, Middle or Near.
- ♦ White Balance: Apart from AUTO, which continuously adjusts image color balance according to any change of lightings in various scenes, the other 5 modes are designed for specific lighting conditions such as Tungsten Lamp, Fluorescent Lamp, Sunlight, Cloudy, and Cloudy Days.
- ◆ Red & Blue gain: Adjust levels in red & blue contrasts in the image. Be aware that when these levels are increased, the image quality will become sharper to a point that noise of the image will also be increased.
- Outdoor Threshold: Values applied for this feature will define how sensitive the motion detection is triggered for outdoor scenes. The lower the number, the less motion will be conditioned for triggering.
- ♦ Indoor: Click to enable operation for any indoor motion detections.



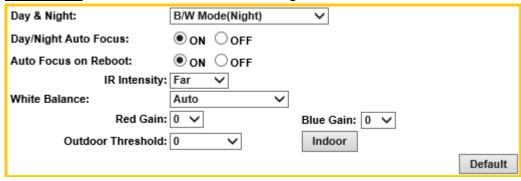
◆ Default: Click on Default button to restore the default settings.

**Color Mode:** Recommended to use for daytime.



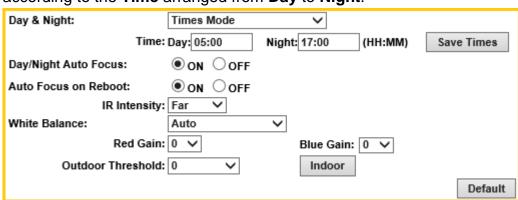
Please refer to <u>Light Sensor Mode</u> for repeated functions.

**B/W Mode:** Recommended to use for nighttime.



Please refer to <u>Light Sensor Mode</u> for repeated functions.

<u>Times Mode</u>: Set the values in **Brightness**, **Contrast**, **Sharpness**, and **Denoise(3D&2D)** for both **Day Profile** and **Night Profile** to be performed according to the **Time** arranged from **Day** to **Night**.



◆ **Time:** The user can define when the daytime (**Day**) starts by filling in the digits such as 05:00 or 12:35. (Hours range: 0~23, minutes range: 0~59) Take the example below:

Time: Day: 05:00 Night: 17:00 (HH:MM)

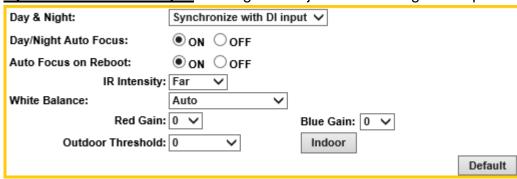


If the time range is inaccurate, a window will pop up to remind you. Same way applies to filling the nighttime (**Night**).

Click Save Times when settings are completed.

Please refer to <u>Light Sensor Mode</u> for repeated functions.

**Synchronize with DI input:** Settings are adjusted according to DI input functions.



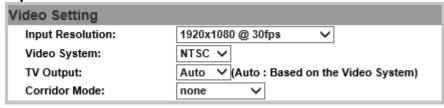
Please refer to <u>Light Sensor Mode</u> for repeated functions.

# 2. Video Setting

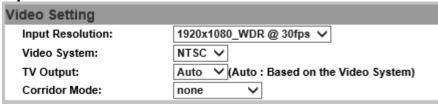
#### A. Video System

• <u>Input resolution</u>: Click <u>Apply</u> to assign input resolution for captured video files. Features vary in FPS (frames-per-second) and will modify the options from <u>Image Setting</u>.

#### **Input Resolution** without **WDR** features:



#### **Input Resolution** with **WDR** features:





- <u>Video System</u>: Choose from NTSC or PAL for video signal.
- TV Output: Choose Auto or select between NTSC and PAL signal.
- **Corridor Mode**: Set the degree of the camera angle for monitoring purpose. The relation of the image and the camera would be as the following:

Corridor mode: None





If **Corridor Mode** is set as **90 degrees** or **270 degrees** the relation of the image and the camera would be as the following:

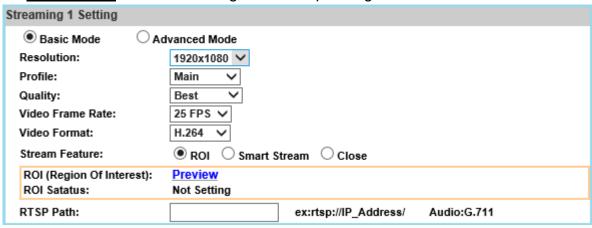
# Corridor Mode: 90 or 270 degrees





# B. Streaming 1 Setting & Streaming 2 Setting

a. Basic Mode: Resolution range varies depending on different modes.



- Resolution: Choose a set for the camera resolution from 1920x1080@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps
- **Profile:** Chose from **Main** or **Baseline** based on bandwidth consumption of the recorded video to be replayed for different applications.
- Quality: Levels vary from Best, High, Standard, Medium to Low. The higher the quality, the bigger the file size. Not ideal for internet transmission.
- Video Frame Rate: Adjust the video refreshing rate for each second.
- Video Format: Select from H.264+, H.264 or JPEG
- **Stream Feature:** Select from the options for operating different features.

Note: You MUST click Apply at the bottom after selecting the feature to enable either ROI or Smart Stream.

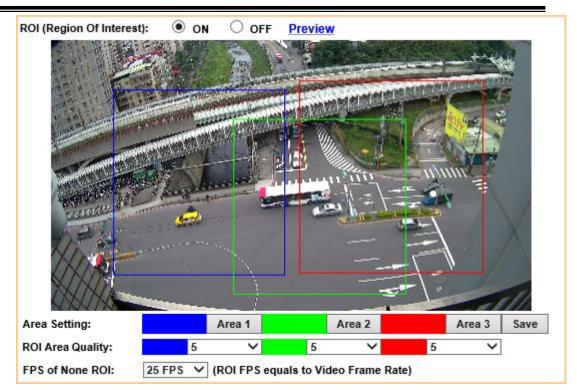
Stream Feature:	● ROI ○ Smart Stream ○ Close
ROI (Region Of Interest):	Preview
ROI Satatus:	Not Setting

- ROI (Region of Interest)

This function helps refine any specific part of the monitoring area which can be dragged out with the mouse at a time, improving efficiency in image observation and management in video compression rate.

Click <u>Preview</u> to enable ROI the function. Click on any of the colors in **Area Setting** to draw an ROI area on the preview screen by dragging your mouse. You can set up to approximately 3 ROI areas.





Adjust the **ROI Area Quality** and **FPS of None ROI** values of each area from each drop down list.

You can see the ROI Status once ROI is activated.



- **Smart Stream:** Enable this mode, set the range of FPS and Bitrate to limit its stream capacity, in order to preserve a better performance of image quality and save more bandwidth.



RTSP Path: Offers the RTSP output connecting path.

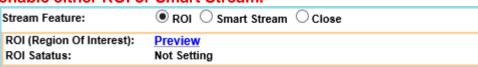


b. Advanced Mode: Resolution range varies depending on different modes.

Streaming 1 Setting	
O Basic Mode	Ivanced Mode
Resolution:	1920x1080 🗸
Profile:	Main 🗸
Bitrate Control Mode:	○ cbr • cvbr
Video Quantitative:	9
Video Bitrate Limit:	7Mbps ∨
Video Frame Rate:	25 FP\$ 🗸
GOP Size:	1 X FPS V GOP = 25
Video Format:	H.264 V
Stream Feature:	● ROI ○ Smart Stream ○ Close
ROI (Region Of Interest):	<u>Preview</u>
ROI Satatus:	Not Setting
RTSP Path:	ex:rtsp://IP_Address/ Audio:G.711

- Resolution: Choose the resolution of the video image from 1920x1080@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps
- Profile: Chose from Main or Baseline based on bandwidth consumption of the recorded video to be replayed for different applications.
- Bitrate Control Mode: There are <u>CBR</u>(Constant Bit Rate) and <u>CVBR</u>(Constrained Variable Bit Rate) modes.
  - <u>CBR</u>: Video Bitrate Limit: (32Kbps~8Mbps)
    The higher the CBR is, the better the video quality is.
  - <u>CVBR</u>: Video Quantitative: 1(Low) ~10(High)
     The higher the compression rate, the lower the picture quality is; vice versa. Avoid image breaking up or lagging by setting the bandwidth limit for CVBR streaming.
- Video Frame Rate: The video refreshing rate per second.
- GOP Size: It means "Group of Pictures". The higher the GOP is, the better the quality is.
- Video Format: H.264+, H.264 or JPEG
- Stream Feature: Select from the options for operating different features.

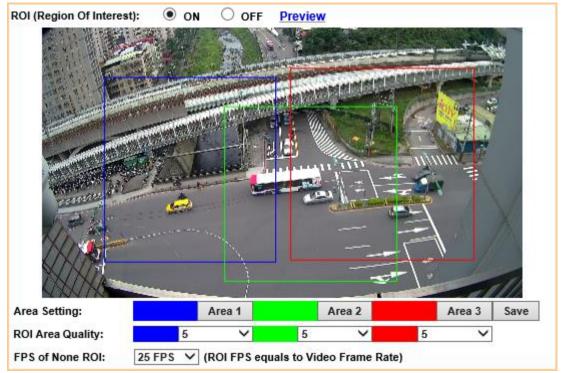
Note: You MUST click Apply at the bottom after selecting the feature to enable either ROI or Smart Stream.





#### - ROI (Region of Interest)

This function helps refine any specific part of the monitoring area which can be dragged out with the mouse at a time, improving efficiency in image observation and management in video compression rate.



Click <u>Preview</u> to enable ROI the function. Click on any of the colors in **Area Setting** to draw an ROI area on the preview screen by dragging your mouse. You can set up to approximately 3 ROI areas. Adjust the **ROI Area Quality** and **FPS of None ROI** values of each area from each drop down list. After the **ROI** is set in the **Stream Feature**, you can see the **ROI Status** once **ROI** is activated.

Stream Feature:	● ROI ○ Smart Stream ○ Close
ROI (Region Of Interest): ROI Satatus:	Preview Area1_ON,Area2_ON,Area3_ON,FPS of None ROI=5,ROI Area Quality=Best

#### - Smart Stream

Stream Feature:	○ ROI ● Smart Stream ○ Close
Smart Stream FPS:	3 FPS ✓
Smart Stream Bitrate:	512Kbps ✓

Enable this mode, set the range of FPS and Bitrate to limit its stream capacity, in order to preserve a better performance of image quality and save more bandwidth.

• RTSP Path: Offers the RTSP output connecting path.



C. <u>Snapshot Setting</u>: Select the image quality from 1(Low) ~10(High).

Snapshot Setting		
Quality:	8	~

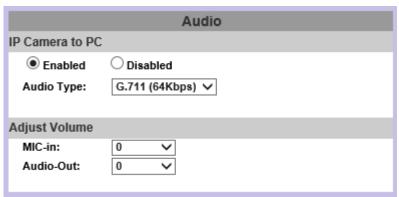
D. 3GPP Streaming Setting: TV output will be shut down during this mode.

3GPP Streaming Setting				
● Open ○ Close				
Resolution:	320x240 🗸			
Video Bitrate:	256Kbps ∨			
Video Frame Rate:	15 FPS ∨			
Video Format:	H.264 🗸			
RTSP Path:	v3	ex:rtsp://IP/v3	Audio:AMR	
			Apply	

- Resolution: 640x480@15fps, 320x240@15fps
- Video Bitrate: The higher Video Bitrate, the better the video quality is.
- Video Frame Rate: The video refreshing rate per second.
- <u>Video Format</u>: H.264+, H.264
- RTSP Path: Offers the RTSP output connecting path.

Please click on the \_\_\_\_Apply\_ button to keep the changes when all the settings are completed and confirmed.

## 3. Audio



The user can send audio from the IP Camera built-in microphone to the remote PC and audio from remote PC to IP Camera's external speaker.

A. <u>IP Camera to PC</u>: Select **Enabled** to start and select the audio type. Tick **chatting** on live browser to enable <u>PC to IP Camera</u> audio function.



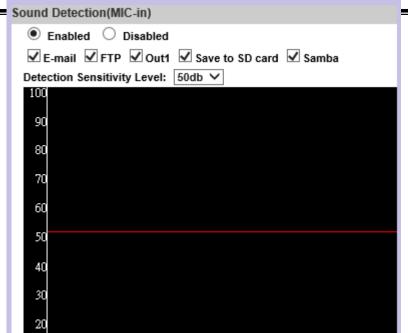


The Audio may not be smooth when the SD card is recording.

- B. Adjust Volume: Select the volume of both Mic-in & Audio-out.

  Click on Apply to keep all the changes.
- C. <u>Sound Detection</u>: Test the audio volume and sound quality first by selecting Enabled. Tick the output destination of the audio file recorded. Adjust the **Detection Sensitivity Level** from 40~90db to display the audio frequency level in the analytical graph below.







# **Event List**

Click to get into the administration page. Click to go back to the live video page.



The IP Camera provides multiple event settings.



# 1. Event Setting

Please change default password is a sign which appears on the preview screen as a reminder, to suggest you change login settings in <u>System</u> to secure your account privacy.

#### A. Motion Detection

A motion detection operation allows user to define a certain area which detects anything moving or changing its position within. It helps user to target on details inside a smaller picture, and effectively identify various surroundings of the monitored environment.



Whenever a motion is detected inside the framed area, the word **Motion!** will appear on live screen, and the data of notification can be sent to assigned directory for remote user.





Area Setting:		Are	a 1		Area 2			Area 3	
Sensitivity:		5	~	5	~	1	5	~	
☑ Area 1:	✓ E-mail	FTP [	Out1	☐ Save to	SD card	☐ Samba		Google Driv	e 🗹 Dropbox
☐ Area 2:	☐ E-mail ☑	FTP	✓ Out1	☐ Save to	SD card	☐ Samba	✓ (	Google Driv	e 🗌 Dropbox
☐ Area 3:	☐ E-mail ☐	FTP [	✓ Out1	✓ Save to	SD card	✓ Samba		Google Driv	e 🗌 Dropbox
Log:	✓ E-mail ✓	FTP	<b>✓</b> Samb	a					
Subject:	IP Camera W	arning!							
Interval:	10 sec ∨ a	period	of time I	between ev	ery two m	otions dete	cted.		
☑ Based on the <u>schedule</u>									

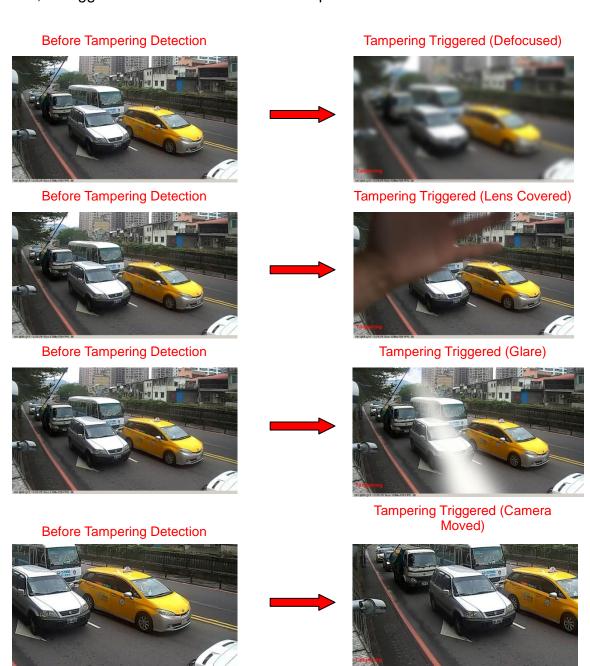
- Area Setting: Click any of the Area 1 Area 2 icons to start drawing 3 areas on the preview screen with your mouse in 3 different colors. Click any Area icon again to discard the motion area which has been made.
- **Sensitivity**: Adjust the level of the responsiveness defined as motion detection. The higher number assigned, the more sensitive, vice versa.
- Area 1/2/3: Data of events triggered within the motion area can be assigned by marking the checkboxes of the source and destination. For example, if you mark the Save to SD card checkbox from Area 3, the video or snapshot triggered in Area 3 motion area will be saved to the Micro SD card.
- <u>Log</u>: Popped up after Save to SD card checkbox is ticked by your mouse.
   Check E-mail/ FTP/ Samba checkboxes on the Log option to send the motion detection log to E-mail/ FTP/ Samba simultaneously.
- <u>Subject</u>: Type in the message you would receive when motion is detected. The default message is "**IP Camera Warning!**".
- <u>Interval</u>: For example, when selecting **10 sec**, once the motion is detected and the action is triggered, it cannot be triggered again within 10 seconds.
- Based on the schedule: Assign the timetable managed from Schedule to enable motion detection after the option checkbox is ticked.



**B.** Tampering Detection

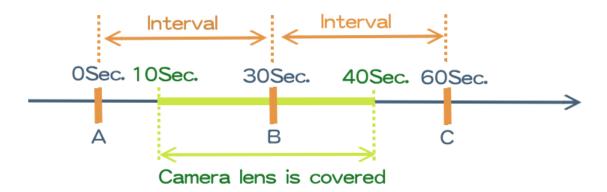
Tampering Detection	1		
Tampering:	○ Enabled		
	□ E-mail □ FTP □ Out1 □ Save to SD card □ Samba		
Interval:	30 sec 💌		

When the camera view is covered, moved, hit by strong light, or out of focus, the tampering detection will be triggered, and send snapshot to mail/FTP/Samba/SD card, or trigger the external alarm. For example:





• <u>Interval</u>: The tampering detecting interval. Take the diagram below as example. The interval is set for 30 second; the camera lens is covered during 10 - 40 sec. At time point B, the camera compares the view with time point A, and sends an alarm when it founds that the lens is covered. At time point C, the camera compares the view with time point B, and sends an alarm when it founds that the lens is uncovered.



#### C. Record File



When an event occurs, the IP camera will record a video clip or take snapshot, and then send to mail/ FTP/ Samba. Select the file format to be saved.

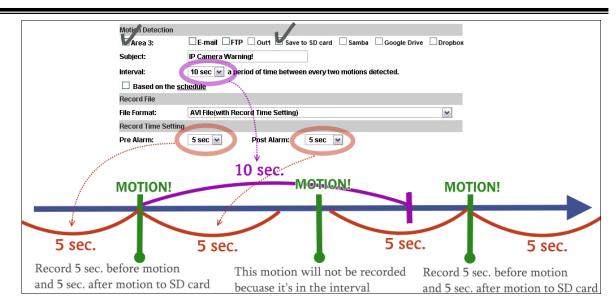
- AVI File (with Record Time Setting): Save AVI video file. The video length is according to the value set in Record Time Setting.
- JPEG Files (with Record Time Setting)\*Only Streaming 1 with JPEG file format.:
   Only when selecting "JPEG" in streaming 1 video format of Video Setting, this option can be enabled. Select this option to save several JPEG picture files. The successive picture files cover a period of time according to the value set in Record Time Setting.
- JPEG File (Single File with Interval Setting): Save single JPEG picture file when the event occurs.

#### D. Record Time Setting



When an event occurs, the IP camera can record a video clip or take a snapshot, and then send it via mail/ FTP/ Samba. Select the video recording length before and after the event is detected.



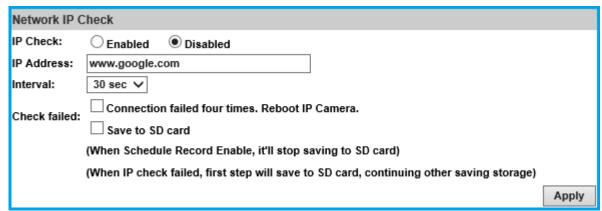


#### E. Network Dis-connected:

Network Dis-connected					
Dis-connected:	Save to SD Card				
	(When Schedule Record Enable, it'll stop saving to SD card)				

The IP Cam will scan the network. The image will be recorded to the SD card after the IP Camera detects network dis-connected, if set "Save to SD card".

#### F. Network IP Check:



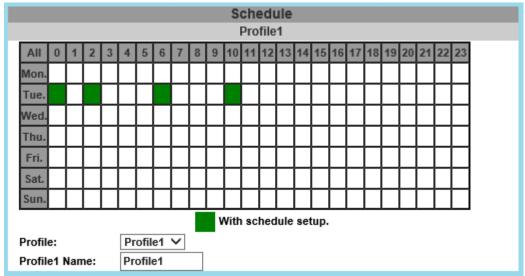
After enabling IP Check, the IP camera can check if the network server is connecting. If the IP camera checking fails for 4 times, the camera will reboot.

Click Apply to update all the settings adjusted.

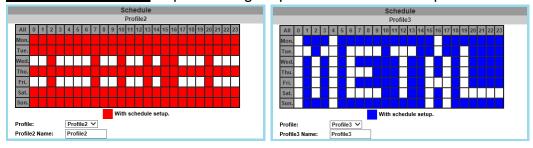


#### 2. Schedule

**A. Schedule:** Tick the grids on the calendar to manage your schedule time.



- **Profile**: Select a Profile from the drop down list.
- Profile(1,2,3) Name: Input & assign a profile name for each profile.



#### **B. Snapshot & Record**

• **Record**: After completing the **Schedule**, the camera data will be recorded according to the schedule made from the calendar.



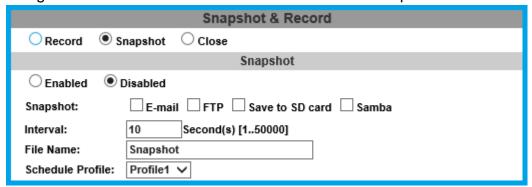
Beware that SD cards may fail in time for being recorded for a long period of time. You may set up how much you would like the SD card memory to be used in order to estimate the right time to swap a new one.



Assign the Schedule Profile time selected from the drop-down list first.

 <u>Snapshot</u>: After enabling the snapshot function; the user can select the storage position of the snapshot file, the interval time of the snapshot and the reserved file name of the snapshot.

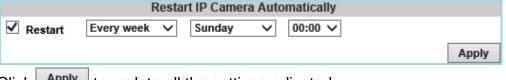
Assign the **Schedule Profile** time selected from the drop-down list first.



Interval: Users can set the interval between two snapshots.

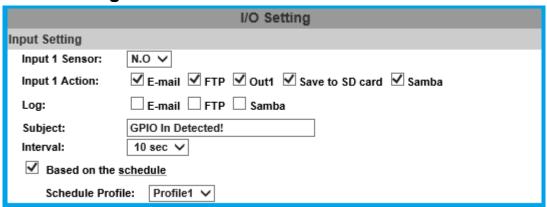
File Name: Enter the file name of your snapshot file.

 <u>Restart IP Camera Automatically</u>: Set up the time for IP camera to restart automatically after ticking **Restart** to enable access.



Click Apply to update all the settings adjusted.

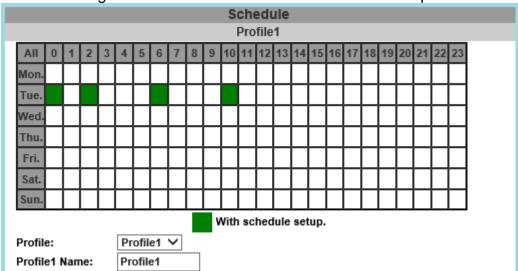
# 3. I/O Setting



A. Input Setting: The IP camera supports input and output. When the input condition is triggered, the relay will be also triggered & a notification will be sent depending what checkboxes are ticked.



- <u>Log</u>: Tick the Save to SD card checkbox to enable the <u>Log</u> which you would like to save data with.
- <u>Subject</u>: Input or edit the message you would like to receive for triggered alarm.
- <u>Interval</u>: For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.
- <u>Based on the schedule</u>: Tick its checkbox to assign timetable from **Schedule**.
   Once the option is activated, only during the selected schedule time the I/O is enabled. Assign the **Profile** timetable selected from the drop-down list first.



Take the schedule timetable above as an example, at <u>1 o'clock on Tuesday</u> has not been colored in the schedule table, then no action will be triggered during that hour.

**B. Output Setting:** The output mode affects the DO or relay out duration.



#### Mode Setting

(i) <u>ON/Off Switch</u>: The camera triggers the external device and lasts for 10 seconds. While in **Output Setting**, enable the **OnOff Switch** by clicking beside the title. You can turn off the alarm manually by clicking "off" at the right bottom of the live video page.



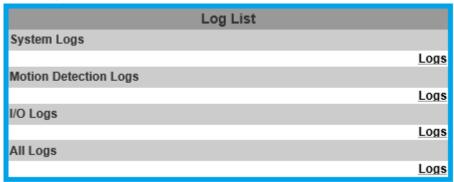


Select **Open** (N.O) or **Close** (N.C) for its sensor from **Normal Status**.

(ii) <u>Time Switch:</u> The camera triggers the external device and lasts for certain time according to the internal setting, and the user is not allowed to break off the alarm manually. Enable **Time Switch** by clicking beside the title, and then adjust the **Normal Status** & **Interval** to your desired level.

Click on the Apply button to keep all the changes.

## 4. Log List



The log keeps data for user to check through events which have occurred during the monitoring operation. **System Logs** won't lose data due to power failure. Choose **All Logs** to list out all the events from **Motion Detection Logs** to **I/O Logs**.

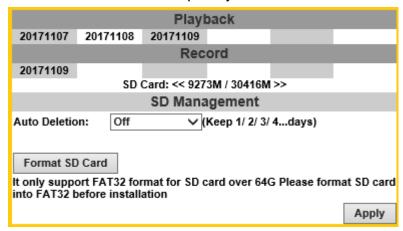




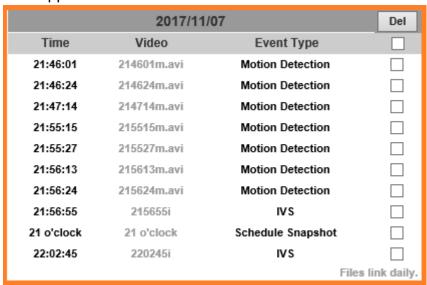
#### 5. SD card

#### A. Playback

Please Insert the Micro SD card before use it. Make sure to push the Micro SD card into the slot completely.



Click the date under the **Playback** title and a list of files will pop up. For example, if the date **2017/11/07** is clicked, all the events happened within that time frame will then appear in a list like the one below.



The enlisted files under **Video** category are files representing an event.

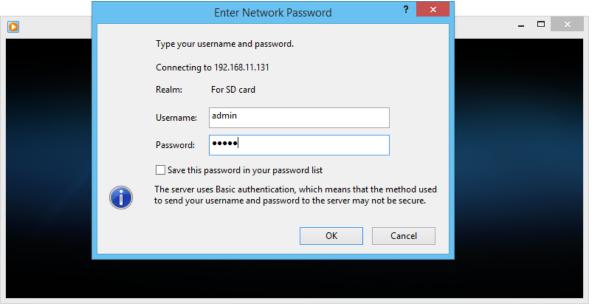
There are 3 types of file formats, and each is different for its own **Event Type**. Notice how the file name formations under the **Video** category represent the time when a file is created.

For instance, the file name "214601m.avi" means the video is recorded at 21:46:01 today, m means Motion Detection, and avi represents the file format.



Click on the file name to open the file. For **avi** files, you need Microsoft Media Player which is supposedly built-in in your PC.

The default Username & Password for playing the video file are both **admin**.

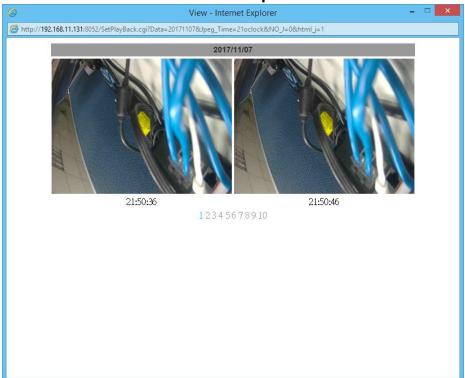


Clicking on an **IVS** file (such as **215655i**) will bring out a pop-up window suggesting an **IVS** event captured as snapshots as the one below:





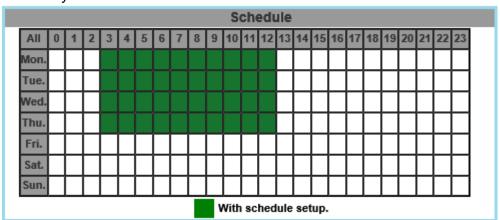
Clicking on any title that is labeled with "time unit" (such as 21 o'clock) at the end will bring out a pop-up window indicating the snapshot taken as scheduled in **Schedule** mode and enabled in **Snapshot** mode.



Click the local icon to delete any file by marking on the checkbox under the **Del** category with a mouse click.

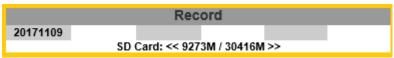
#### B. Record

The recording mode is enabled after **Record** is set in **Schedule** mode. Take the schedule calendar below for example, the grids coloured in green between 3~12 are scheduled to start recording from 3 o'clock to 12 o'clock from Monday to Thursday.





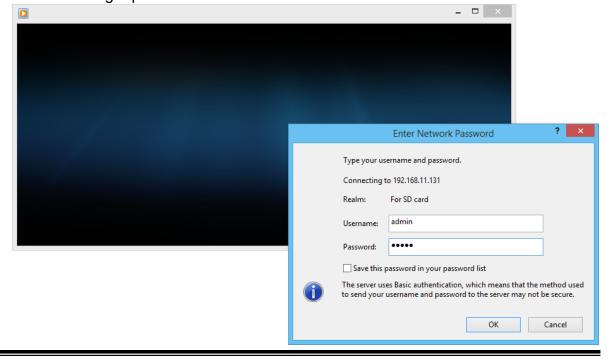
Once the recording mode is on, the video data recorded will be found and labelled as **2017/11/09**.



Click on 2017/11/09 to enter the next page where all files recorded on that date are enlisted.



Click on any video title to open Microsoft Media Player (supposedly already built-in in your PC) and play the video file. Key-in **admin** for both Username & Password to get permission to view the video.





The number at the bottom indicates the distributive law of the current SD Card memory which is divided and assigned to different types of recording purposes.

The left side shows how much memory is still available, and the right side shows how much the total memory is.

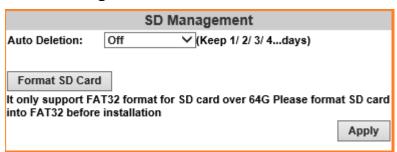


If the memory of the SD card is **over 128G**, **70%** of the memory will be used for scheduled recording, and **30%** will be used for event recording.

If the memory of the SD card is **below 128G**, **50%** of the memory will be used for scheduled recording, and **50%** will be used for event recording.

Click the local icon to delete any file by marking on the checkbox under the Del category with a mouse click.

#### C. SD Management



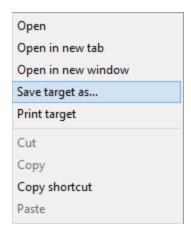
a. <u>Auto Deletion</u>: Choosing "The 1st day" means the recoding file will be kept for one day. Example: It is five o'clock now. Choose "The 1st day". The files will be kept from five o'clock yesterday to five o'clock today. The oldest file will be deleted if the Micro SD card is full.

Note: The use of the SD card will slightly affect the operation of the IP Camera, such as affecting the frame rate of the video.

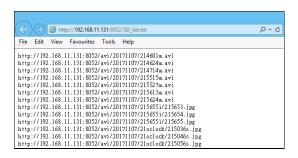
b. <u>Format SD Card</u>: Click the icon to process the SD Card formatting into FAT32 format. Be cautious that since it only supports FAT format for SD Card over 64G, please format SD Card into FAT32 before installation.



#### D. SD Card Files



- a. <u>Downloading the Files</u>: For both <u>Playback</u> and <u>Record</u> mode, after entering a date data to see the <u>Video</u> and <u>Event Type</u>, right-click on a title under the <u>Video</u> list, and choose "<u>Save Target As...</u>" from its pop-up window to start downloading the file.
- b. <u>Linking the Files</u>: For both <u>Playback</u> and <u>Record</u> mode, find the <u>Files link daily</u> link at the right corner of the bottom after entering a date data to see the <u>Video</u> and <u>Event Type</u>. Click on the link, a window will pop up.



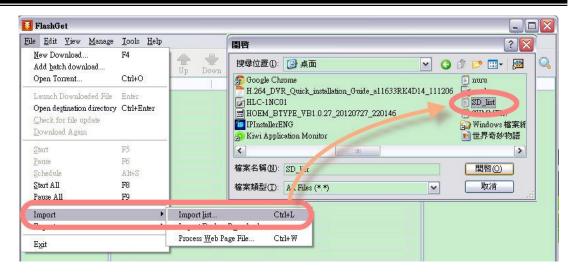
You may copy any of the protocol provided in the window and paste it on a web browser as a URL address to look at each file.

- c. <u>Copy to PC</u>: You can insert the Micro SD card to the PC and read the files directly, or use FlashGet instead to download the files from the IP camera. (In this way you do not need to pull out the Micro SD card from the camera.) To use FlashGet for downloading image and video data from the Micro SD card, please follow the steps:
  - i. Enter data list and right-click "Files link daily.", select "save target as..." then save the link list to PC.

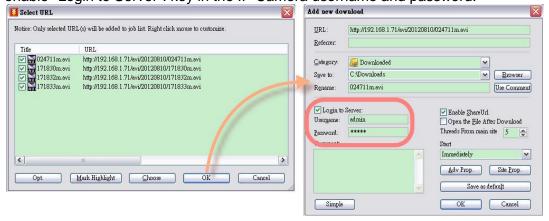


ii. Open FlashGet, select "File"→ "Import" → "Import list", and find the link list file you just saved. The file name may be called "SD\_list".

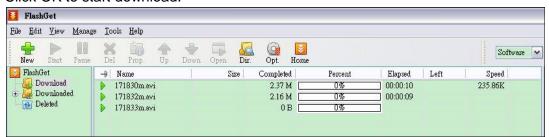




**iii.** FlashGet will show you the link list, and you can tick the files you want to copy to your PC. Give the directory path in the new download window, and remember to enable "Login to Server": key in the IP Camera username and password.



iv. Click OK to start download.

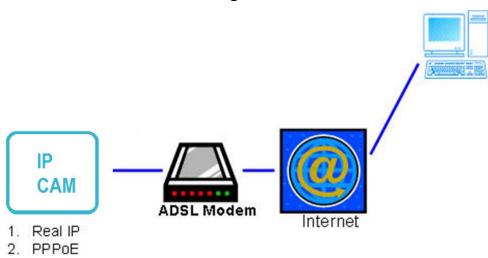


• FlashGet is free software that can be downloaded from FlashGet official website. The example above is based on FlashGet ver.1.9.6.



# **Network Configuration**

### **Configuration 1**



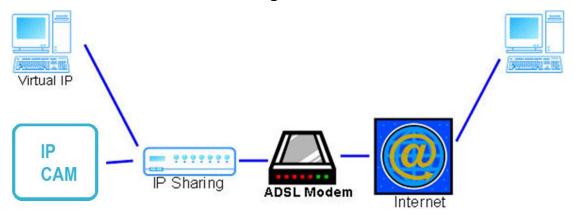
- a. Internet Access: ADSL or Cable Modem
- **b.** <u>IP address:</u> One real IP or one dynamic IP
- c. Only the IP Camera is connected to the internet
- **d.** For fixed real IP, set up the IP into IP Camera. For dynamic IP, start PPPoE.

# Configuration 2 1. Real IP 2. PPPoE Switch Hub ADSL Modem Internet

- a. Internet Access: ADSL or Cable Modem
- b. IP address: More than one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: Switch Hub.
- e. For fixed real IP, set up the IP into IP Camera and PC. For dynamic IP, start PPPoE.



# **Configuration 3**



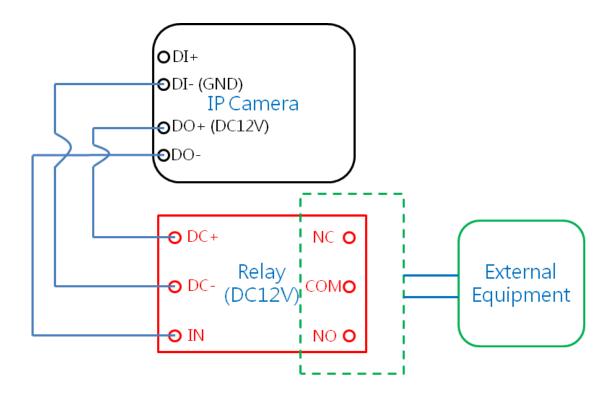
- a. Internet Access: ADSL or Cable Modem
- b. IP address: one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: IP sharing
- e. Use virtual IP, set up port forwarding in IP sharing



# I/O Configuration

## 1. I/O Connection

- A. Connect the GND & DO pin to the external relay (buzzer) device.
- B. Connect the GND & DI pin to the external trigger device.



## C. I/O PIN definition

• GND (Ground): Initial state is LOW

DO (Digital Output): Max. 50mA ,.DC 12V

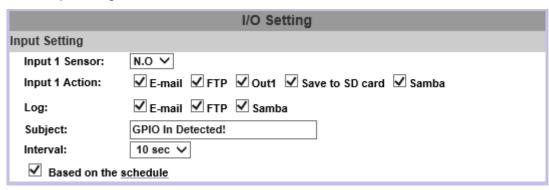
• DI (Digital Input): Max. DC 6V



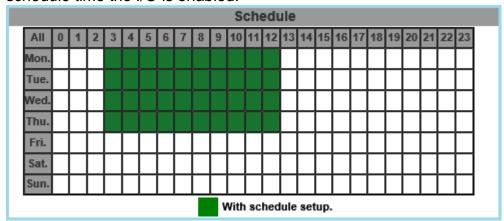
## 2. I/O Setup

Click I/O Setting from the system setup page via IE, and check "Out1" to enable I/O signal.

**A. Input Setting:** The IP Cam supports input and output. When the input condition is triggered, the relay will be also triggered & a notification will be sent depending what checkboxes are ticked.



- <u>Log</u>: Tick the Save to SD card checkbox to enable the <u>Log</u> which you would like to save data with.
- <u>Subject</u>: Input or edit the message you would like to receive for triggered alarm.
- <u>Interval</u>: For example, if you select 10 sec, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.
- <u>Based on the schedule</u>: Tick its checkbox to assign timetable from Schedule. Once the option is activated, only during the selected schedule time the I/O is enabled.



Take the schedule timetable above as an example, at <u>1 o'clock on Tuesday</u> has not been colored in the schedule table, then no action will be triggered during that hour.



**B. Output Setting:** After the external input and output hardware are installed, you can enable the "Relay Out" function on the live video page to test if DO / Relay Out works.





#### Mode Setting

(i) On Off Switch mode: Clicking "ON" will trigger the external output device for 10 seconds. For example, your alarm buzzer will continuously ring for 10 seconds. After 10 seconds the buzzer stops ringing, or you can manually break off the output signal by clicking "OFF".



Select HIGH or GROUNDED To adjust the Output Waveform.

(ii) <u>Time Switch mode</u>: The camera triggers the external device and lasts for certain time according to the internal setting, and the user is not allowed to break off the alarm manually.



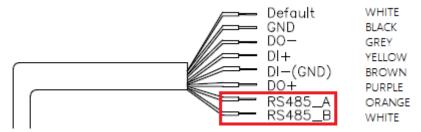
Click "Pulse", the camera will trigger the external output device for several seconds; the duration length is according to the "interval" setting in Output Setting.

Click on the Apply button to keep all the changes.

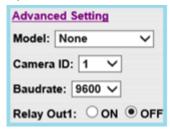


## 3. RS-485

You can link the camera to NVR, DVR, cradle head, or joystick controller by RS-485. Please use cable to connect D+ with D+ of two devices, and connect D- with D-.



After the RS-485 Setting in I/O Setting is enabled, you can turn to the <u>live video</u> page and check the related options.

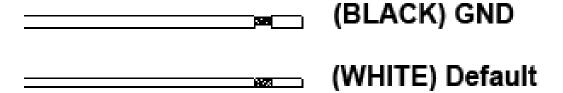




# **Factory Default**

If you forget your password, please follow the steps to set back the IP Camera to its default value.

- Remove the power and Ethernet cable.
- Join the Black (GND) and White (Default) cables



- Connect the power back to the camera. It will take around 30 seconds to boot the camera.
- Separate the Black(GND) and White (Default) cables
- Re-log in the camera using the default IP (http://192.168.1.200), and user name: admin, password: admin.

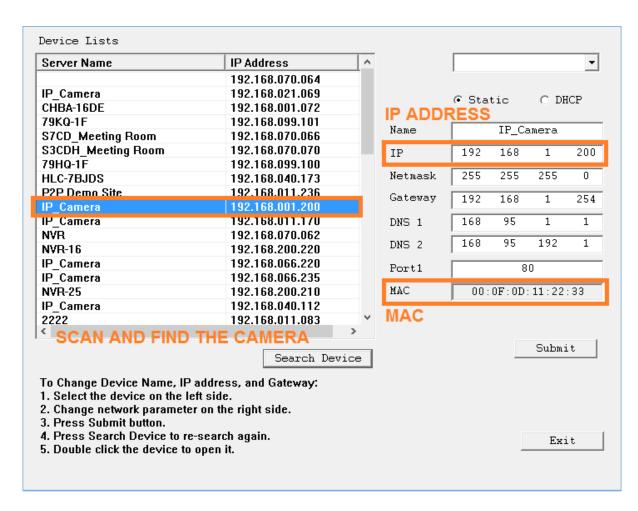


# **Universal Password**

If you forgot the password of your IP camera, you can reset the camera to factory default, or follow the procedure below to generate a universal password.

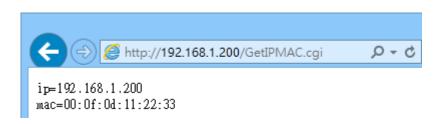
**Note:** Universal password will be valid only when you enable the function in **User Management.** 

First, you need to know the IP address and MAC address of your IP camera. You
can use IP Scanner to scan the LAN, and see the IP address and MAC address
on the side column.





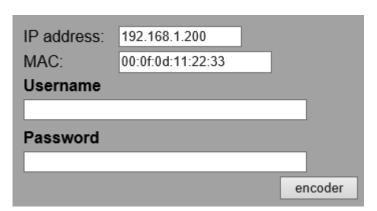
Or else, if you already know the IP address of camera: Open the web browser, key in http:// (IP address) /GetIPMAC.cgi and press enter. The IP address and MAC address will be displayed on browser.



**2.** Locate the .html file named **Universal Password\_V1.1** in the Universal Password from the Applications folders in CD-ROM. Open it with a web browser.



**3.** The camera IP address and MAC address will be displayed automatically in both IP Address and MAC columns.



After clicking on **encoder**, a set of username and password will appear.

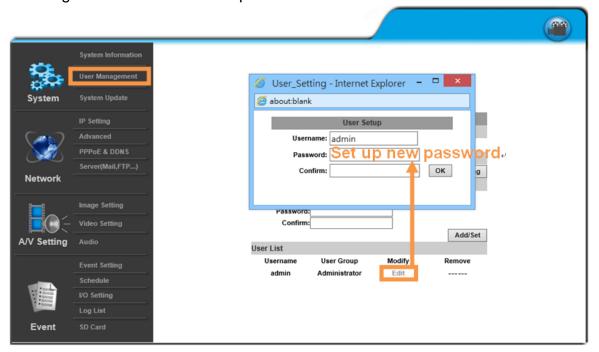
The universal username and password are generated from the IP address and MAC address you key-in, so if you change the camera IP address the universal password changes, too.



**4.** Use the generated username & password to log in the camera account.

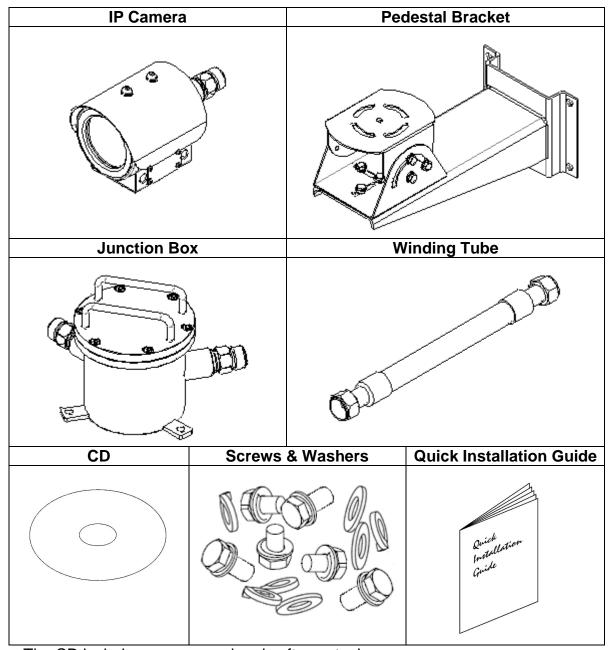


5. Now you can login as administrator. Turn to User Management page. The use of universal password does not affect the previous user setting, so the administrator account password does not change until you edit it. Please click Edit to give a new administrator password.





# **Package Contents**



• The CD includes user manual and software tools