

# Troubleshooting Background Knowledge

Version 1.1

Date: June 12<sup>th</sup>, 2014

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# 1. Live Video

## 1.1 How to log in web

The first time after log in, it will pop up windows like this:

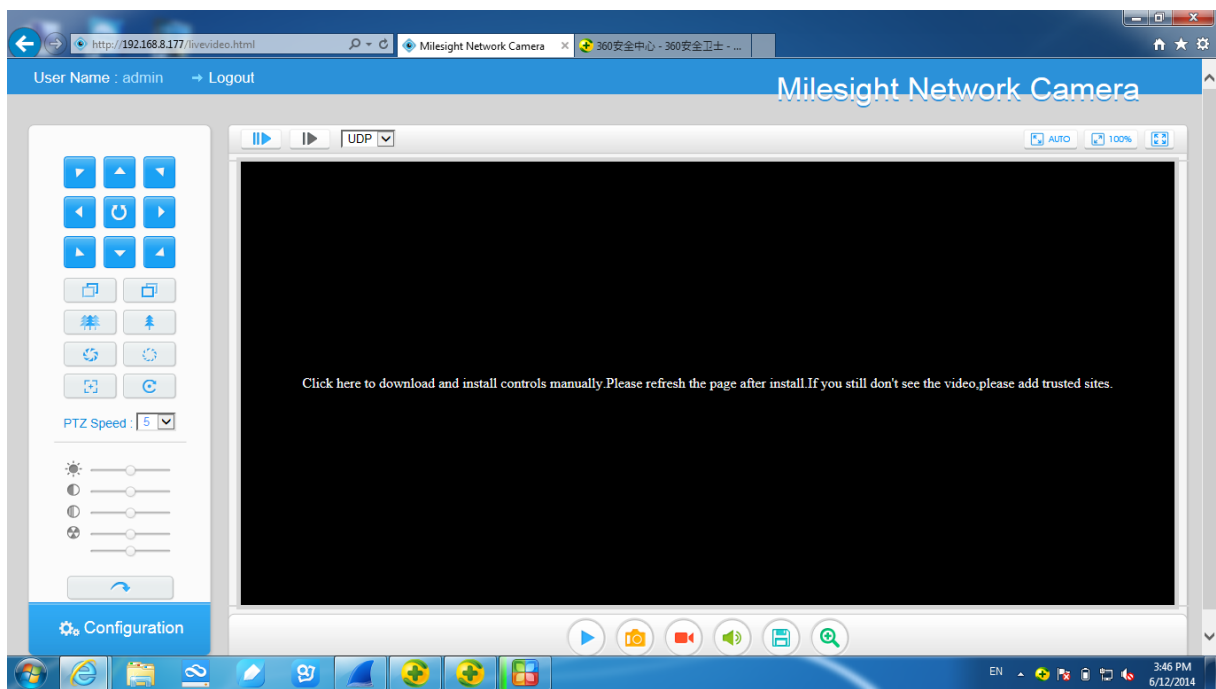


Figure 1-1 Login in

Please download the Activex first.

**Note:**

- (1) Please save the Activex first, not run it directly;
- (2) Now it can support to play on IE8(and above)/Firefox/Chrome, but for IE10, Please use '**compatible mode**', and for IE11, Please use '**Compatibility View Settings**'.

For IE10, Please choose the compatible mode like this.

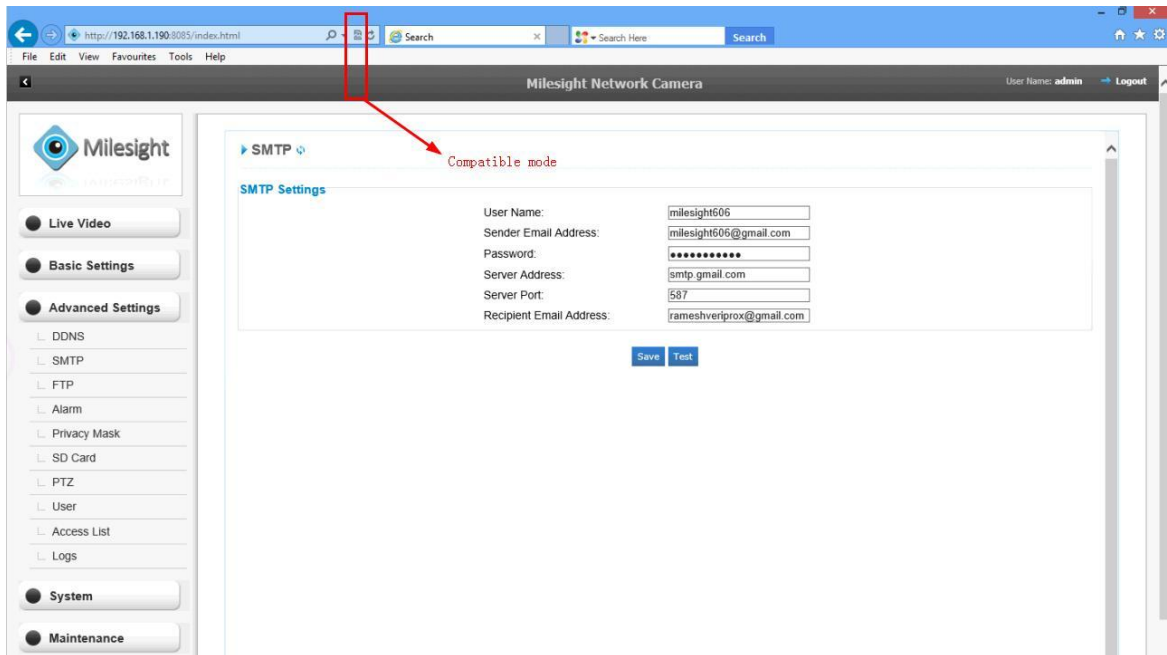


Figure 1-2 IE10 Settings

For IE11, Please choose the **Compatibility View Settings** like this.

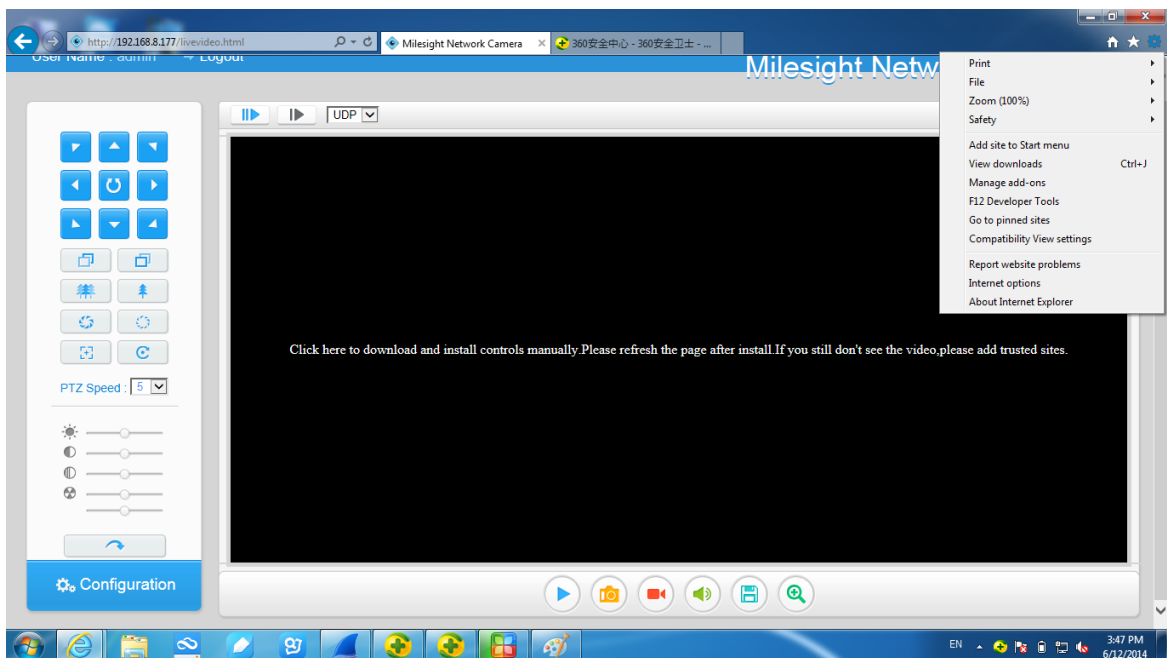


Figure 1-3 IE11 Settings

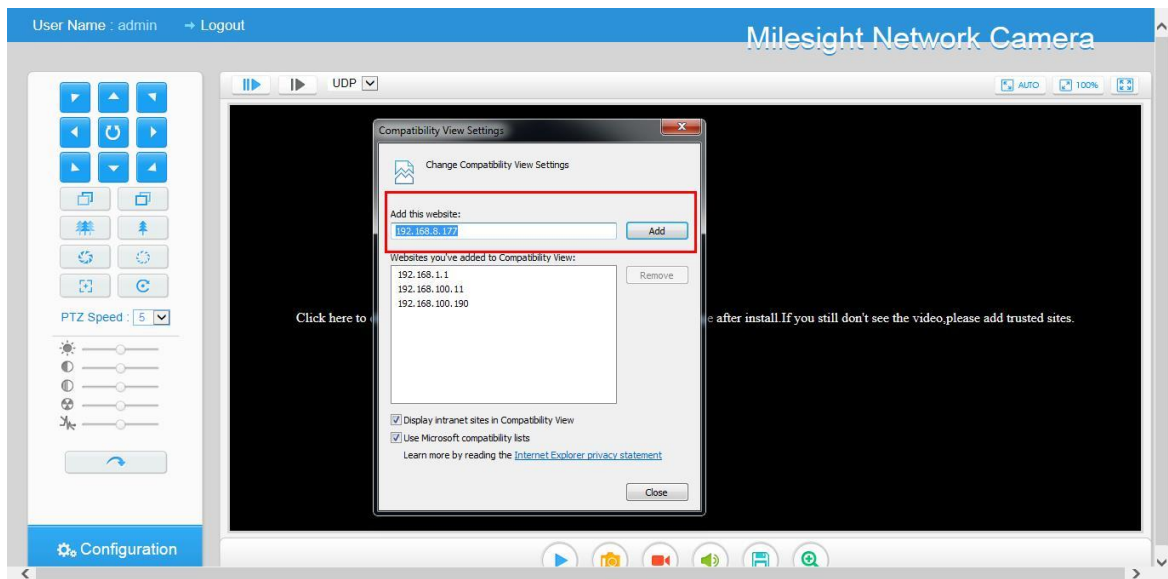


Figure 1-4 IE11 Settings

## 1.2 How to use E-PTZ

(1) “PTZ” refers to a specific type of camera hardware. A PTZ camera uses motors to physically adjust the camera’s aim and zoom. Users are able to remotely control the actual orientation and optical zoom of the camera.

(2) Technically, the “E-PTZ” label refers to a software feature rather than the hardware. A camera using “E-PTZ” does not physically move. Users are still able to digitally zoom and navigate the camera’s viewable area. These cameras are not always labeled “E-PTZ” – most would simply refer to it as a digital zoom.

For Milesight’s cameras, only those **MS-C26XX** and **MS-C36XX** can support “E-PTZ”.

Step1: Go to Video page, please change the resolution into **720P**.

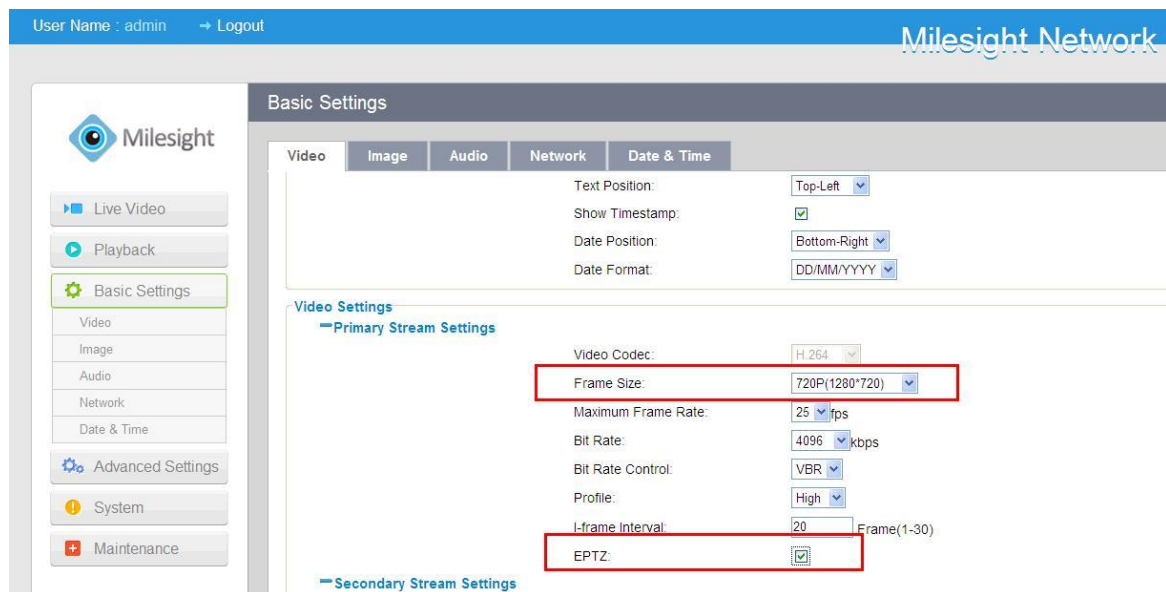


Figure 1-5 E-PTZ

Step2: Now you are able to use it. You can digitally zoom and move the directions for the camera. Then you are also able to move by mouse.

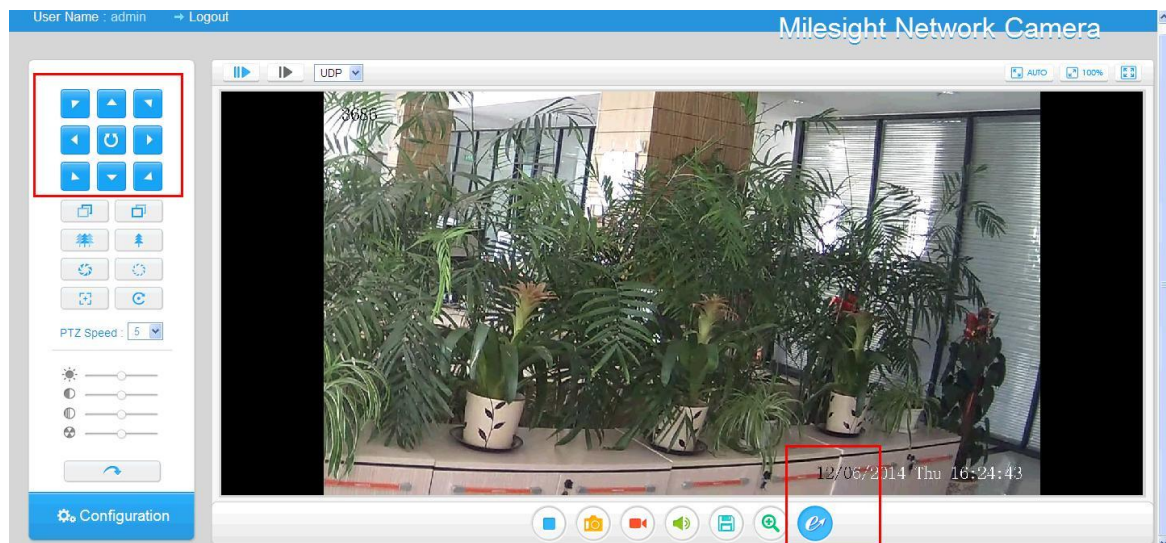


Figure 1-6 E-PTZ

**Note: All Milesight cameras support Digital Zoom.**

## 1.3 Noise Reduction

At night, for the live video, if there's many noise on the image, you can turn on the Noise Reduction.

**Go to Basic Settings-> Image-> Advanced Settings-> Check on the Noise Reduction.**

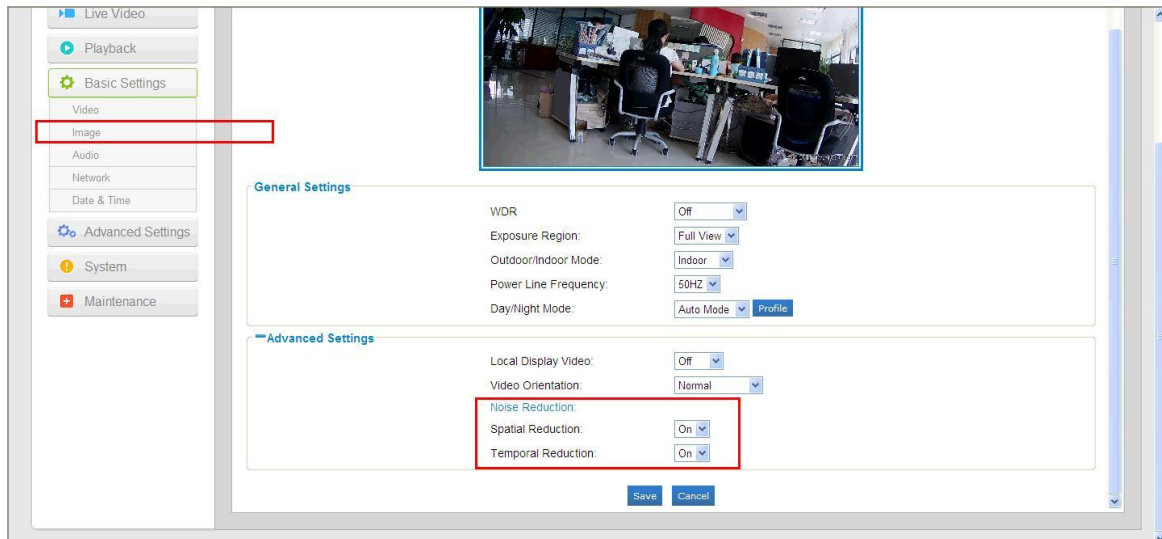


Figure 1-7 Noise Reduction

## 1.4 How to access to the camera from remote

If you want to access your camera from remote, you have to set port forwarding through the router. For more port forwarding through your router, you have to set for the 'NAT Rule' or **port mapping**, and you need a port (1-65535) to mapping.

Take our online demo as an example (username: admin, pswd: ms1234), as you can see in the picture. Here include **HTTP port and RTSP port**, (8081 is like your http port, and 554 is the RTSP port, 192.168.5.103 is your Lan IP address of the camera)

So what you have to do is just forward a port as required, Do the port mapping via your router,

**A. HTTP port: 80->8081**

**B. RTSP port: 554->554**

**Note:** Log in the router, and do the settings like bellowing, the settings will be different with different router, please require to the router providers.

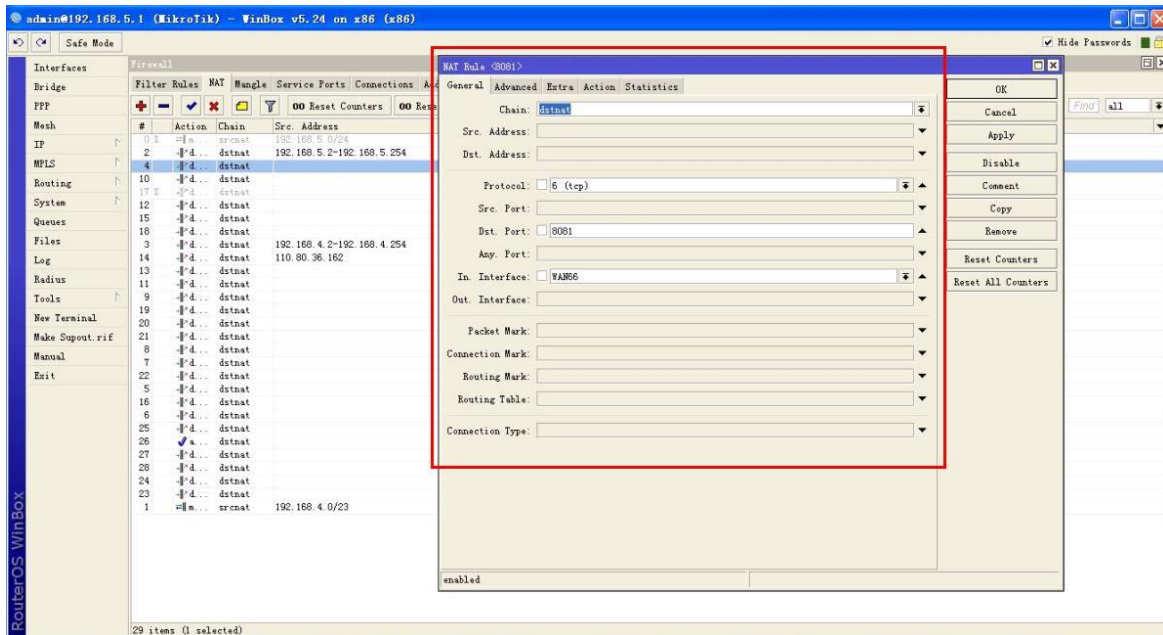


Figure 1-8 Port forwarding

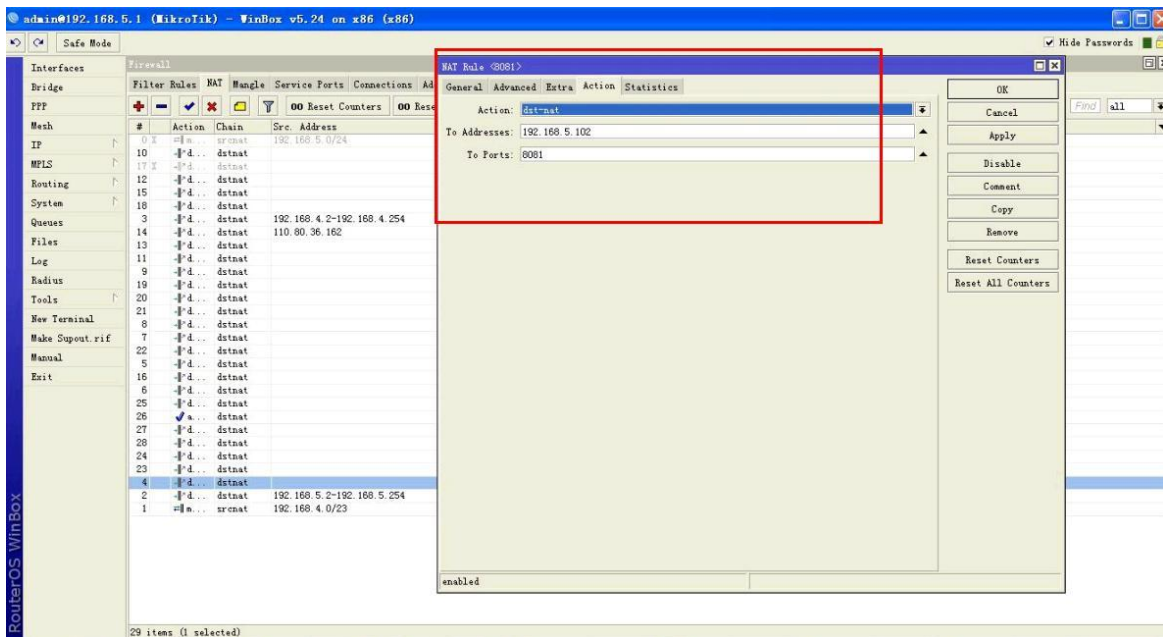


Figure 1-9 Port forwarding



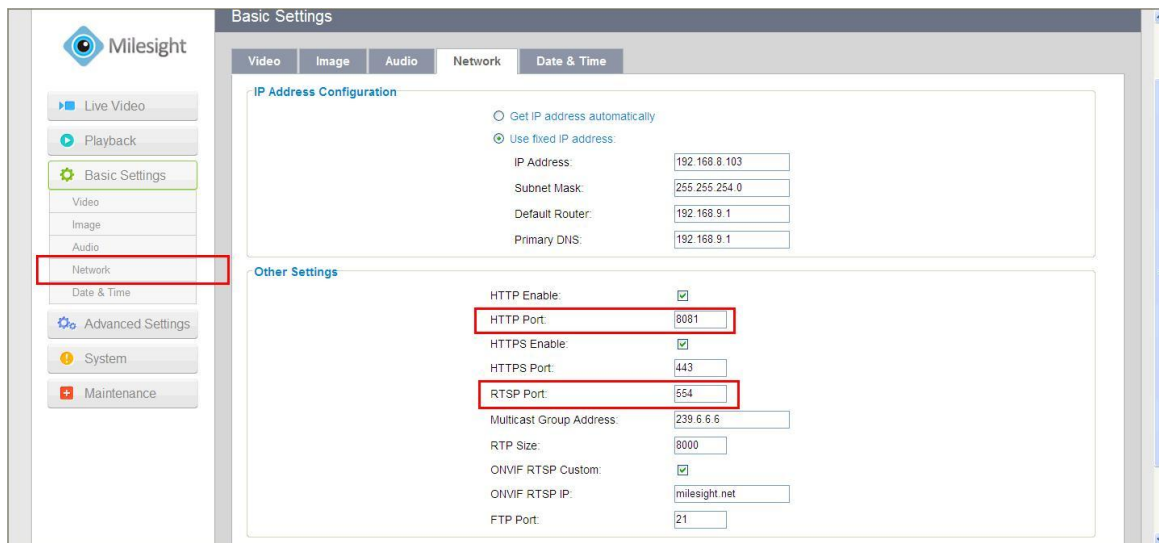


Figure 1-10 Port Forwarding

### (1) Access via browser by Using Public IP Address from remote

After do the port mapping, you can access the camera over web like: <http://27.154.242.138:8081> , **27.154.242.138** is your public IP address, **8081** is the http port after port mapping.

### (2) Access via browser by Using DDNS from remote

Here, if you have a DDNS account, you can also DDNS for remote access. Like: <http://milesight.net:8081> .

More about '**NAT Rule**' or '**port mapping**', you can search on Google.

The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.

Example: <http://www.wikihow.com/Set-Up-Port-Forwarding-on-a-Router>

### (3) Access via M-Sight APP via ONVIF Type

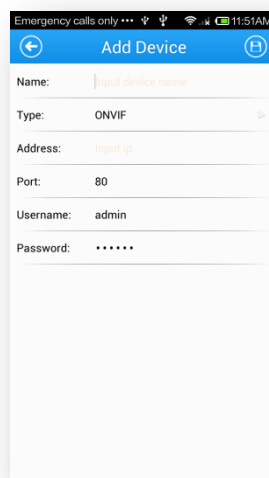


Figure 1-11 ONVIF

Add the cameras via ONVIF, enter the Public IP address, username, password and the ONVIF port. E.g.:

Name: MS-C3366

Address: 27.154.242.138(from remote, here need to enter **Public IP**)

Port: 80 (enter the port after port forwarding on router)

Username: admin

Password: ms1234

**Note:**

**Before you add via ONVIF on M-Sight, you need to check on this. Go to the video page and enter the Public IP on this option. (Also support DDNS here)**



Other Settings

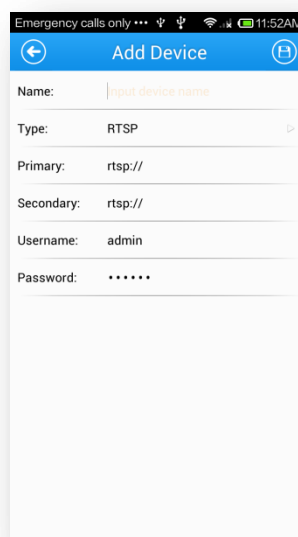
HTTP Enable:	<input checked="" type="checkbox"/>
HTTP Port:	80
HTTPS Enable:	<input checked="" type="checkbox"/>
HTTPS Port:	443
RTSP Port:	554
Multicast Group Address:	239.6.6.6
RTP Size:	8000
ONVIF RTSP Custom:	<input checked="" type="checkbox"/>
ONVIF RTSP IP:	27.154.242.138
FTP Port:	21

Public IP

Save

Figure 1-12 Public IP

**(4) Access via M-Sight APP via RTSP Type**



Emergency calls only ... 11:52AM

← Add Device →

Name: input device name

Type: RTSP

Primary: rtsp://

Secondary: rtsp://

Username: admin

Password: .....

Figure 1-13 RTSP

Add the camera via RTSP type, enter the right URL address, username and the password.

E.g.:

Name: MS-3366

A. For main stream: <rtsp://Public IP Address:554/main>

B. For sub stream: <rtsp://Public IP Address:554/sub>

## 1.5 How to play Milesight camera stream via RTSP

The RTSP stream format for Milesight camera is like this:

Main stream:

(1) <rtsp://username:password@IP:RTSP Port/main>

(2) <rtsp://IP:RTSP Port/main>

Sub stream:

(1) <rtsp://username:password@IP:RTSP Port/sub>

(2) <rtsp://IP:RTSP Port/sub>

## 1.6 How to play Milesight camera stream via HTTP

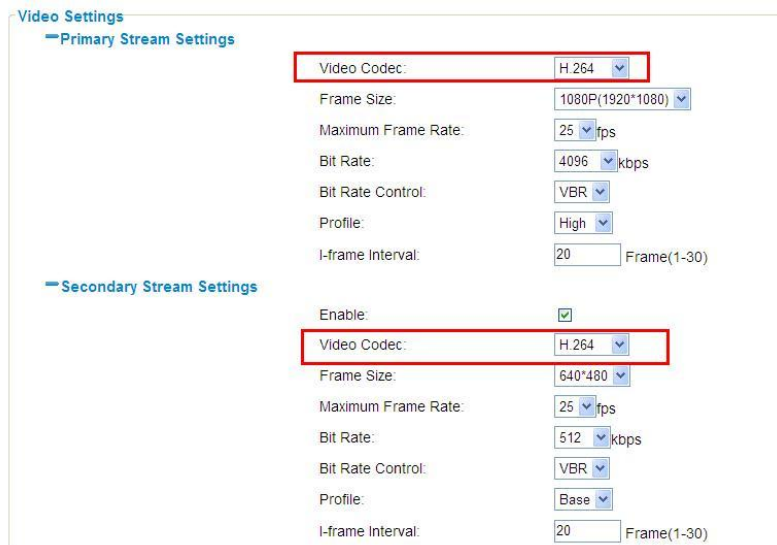
Milesight camera can support to play stream via HTTP url like this:

(1) MJPEG <http://admin:ms1234@192.168.5.123:80/ipcam/mjpeg.cgi>

(2) H.264 <http://admin:ms1234@192.168.5.123:80/ipcam/avc.cgi>

(3) MPEG-4 <http://admin:ms1234@192.168.5.123:80/ipcam/mpeg4.cgi>

For these 3 types, if you want to play, you need to set the video codec type first.



The screenshot shows the 'Video Settings' interface. It is divided into two sections: 'Primary Stream Settings' and 'Secondary Stream Settings'. In the 'Primary Stream Settings' section, the 'Video Codec' is set to 'H.264'. Other settings include Frame Size: 1080P(1920\*1080), Maximum Frame Rate: 25 fps, Bit Rate: 4096 kbps, Bit Rate Control: VBR, Profile: High, and I-frame Interval: 20 Frame(1-30). In the 'Secondary Stream Settings' section, the 'Enable' checkbox is checked, and the 'Video Codec' is also set to 'H.264'. Other settings include Frame Size: 640\*480, Maximum Frame Rate: 25 fps, Bit Rate: 512 kbps, Bit Rate Control: VBR, Profile: Base, and I-frame Interval: 20 Frame(1-30).

Figure 1-14 HTTP stream

## 1.7 How to get an image from Milesight camera via HTTP

Support to save the jpg via using HTTP in two ways:

### (1) Get the jpg via browser directly

A. <http://IP:80/cgi-bin/operator/snapshot.cgi?mainstream>

B. <http://IP:80/cgi-bin/operator/snapshot.cgi?substream>

### (2) Get the jpg via ONVIF

A. <http://IP/cgi-bin/operator/snapshot.cgi?mainstream>

B. <http://IP/cgi-bin/operator/snapshot.cgi?substream>

## 2. Advanced Settings

### 2.1 How to use SIP on Milesight camera

Up to now, the camera support SIP with **H.264&MPEG-4**, and only for **2<sup>nd</sup> stream**, so please confirm again with the SIP Phone, please make sure it support H.264 or MPEG-4.

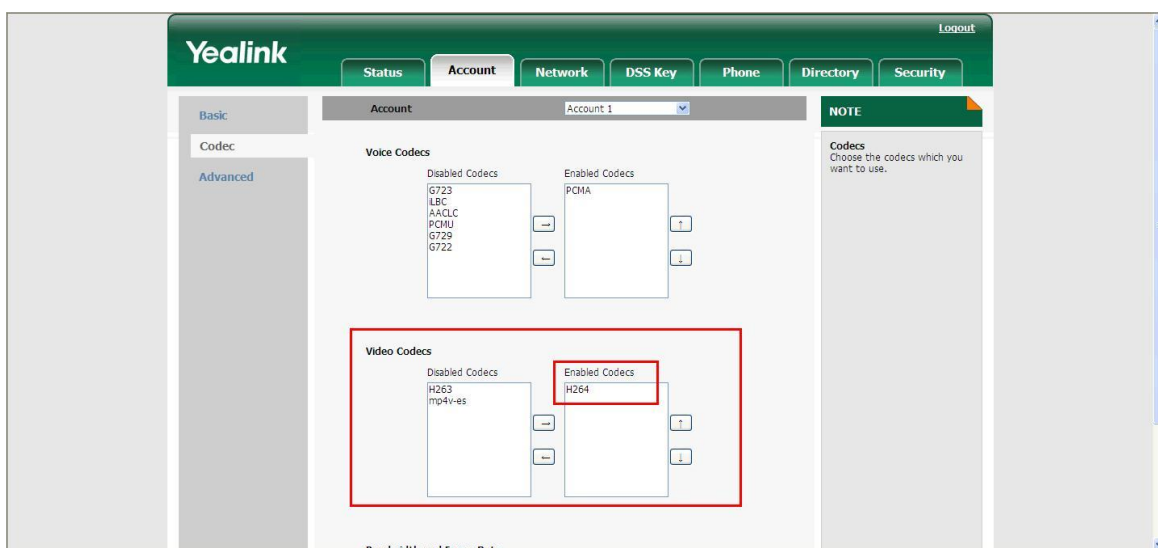


Figure 2-1 SIP Phone

There are two ways to call sip phone:

### (1) Register to an server

Take MyPBX for example:

Step1: Please log in the web, and then create a new account for Camera.

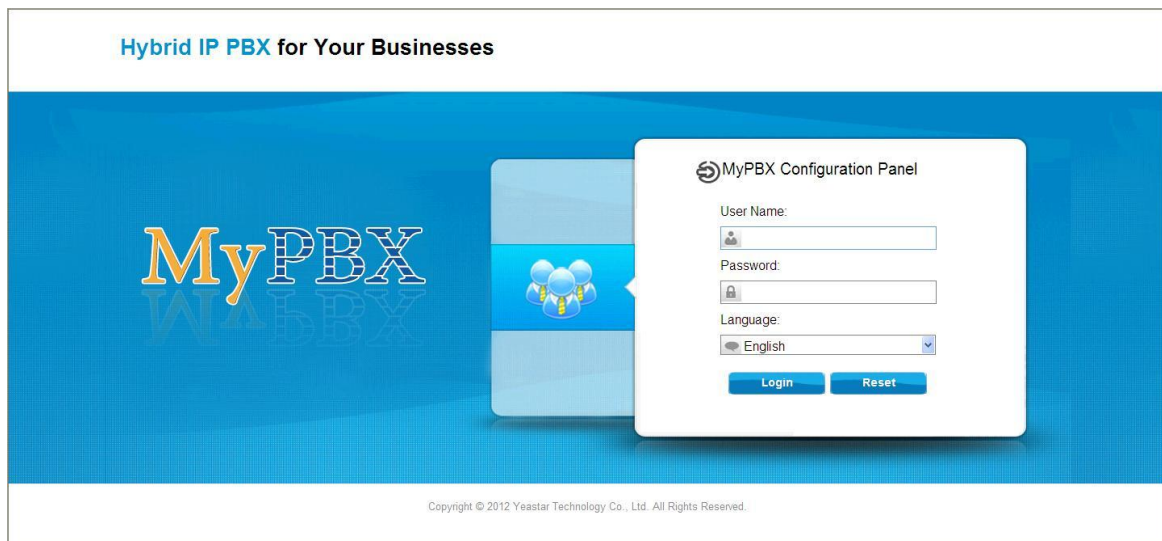


Figure 2-2 MyPBX

Step2: Click on the 'PBX' option.

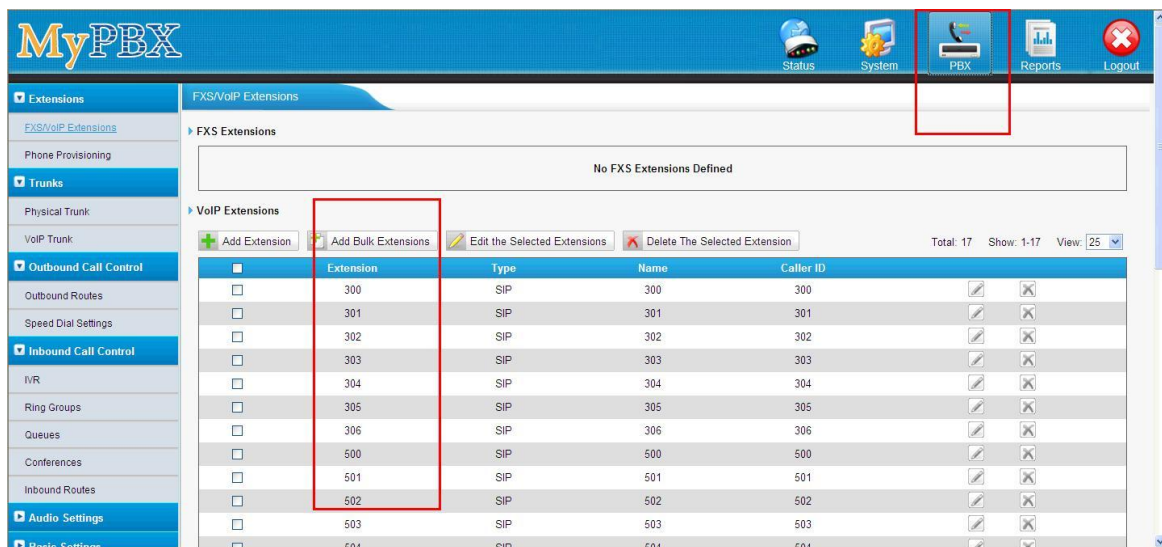


Figure 2-3 Add a new account

Step3: Choose to add a new extension.

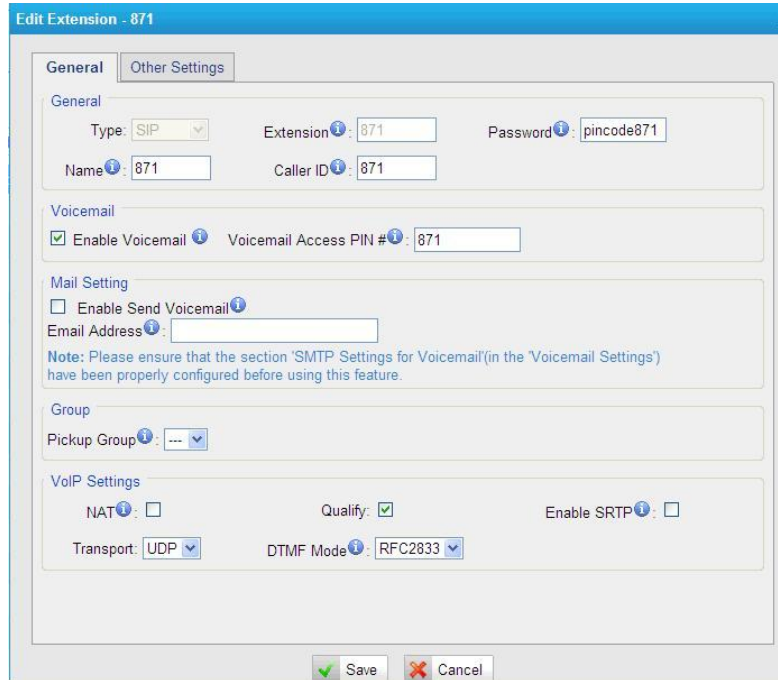


Figure 2-4 SIP Extension

Step3: Enter the information for account under server. And if success, the status will be 'Registered'.

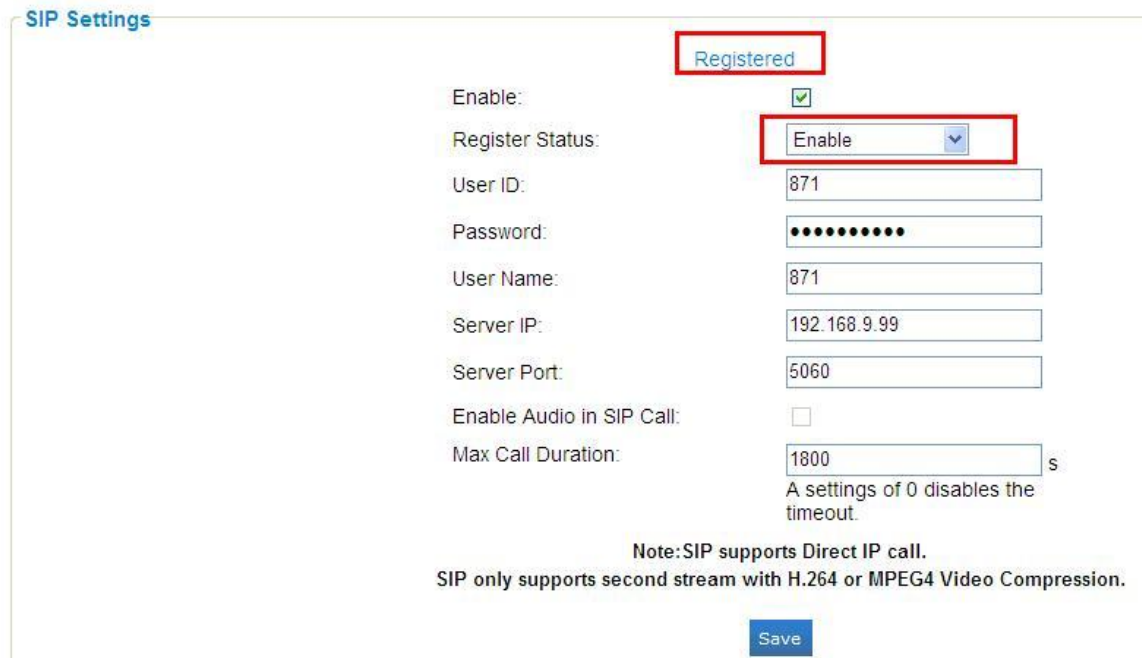


Figure 2-5 SIP Account

**(2) Call IP directly**

Check on the 'Enable' option and choose 'Disable' mode.

SIP Settings

Unregistered

Enable:	<input checked="" type="checkbox"/>
Register Status:	Disable <input type="button" value="v"/>
User ID:	871
Password:	.....
User Name:	871
Server IP:	192.168.9.99
Server Port:	5060
Enable Audio in SIP Call:	<input type="checkbox"/>
Max Call Duration:	1800 s

A settings of 0 disables the timeout.

Note: SIP supports Direct IP call.  
 SIP only supports second stream with H.264 or MPEG4 Video Compression.

Figure 2-6 Call IP directly

**Note:** The camera and SIP Phone should be in the same segment, it's able to ping each other first. And confirm again with the subnet mask settings.

## 2.2 How to use the SMTP

Here we provide an account for test: please save and click on the 'Test' button, after successfully, you will receive an email named '**123ftp.txt**'.

User Name:	milesight606
Sender Email Address:	milesight606@gmail.com
Password:	ms123456789
Server Address:	smtp.gmail.com
Server Port:	587
Recipient Email Address:	Your e-mail

## 2.2 How to set Motion Detection

Log in web, and go to Advanced Settings->Alarm

For motion detection, you need to Set the Motion areas and schedule first.



**Alarm Event**

Enable Alarm:

Trigger Type:  Motion Detection

Network Lost

Audio Alarm  
(Please open the audio.)

External Input

Trigger Duration: 30 seconds

Figure 2-7 Motion Settings

Step1: Set Motion Region and choose the sensitivity.

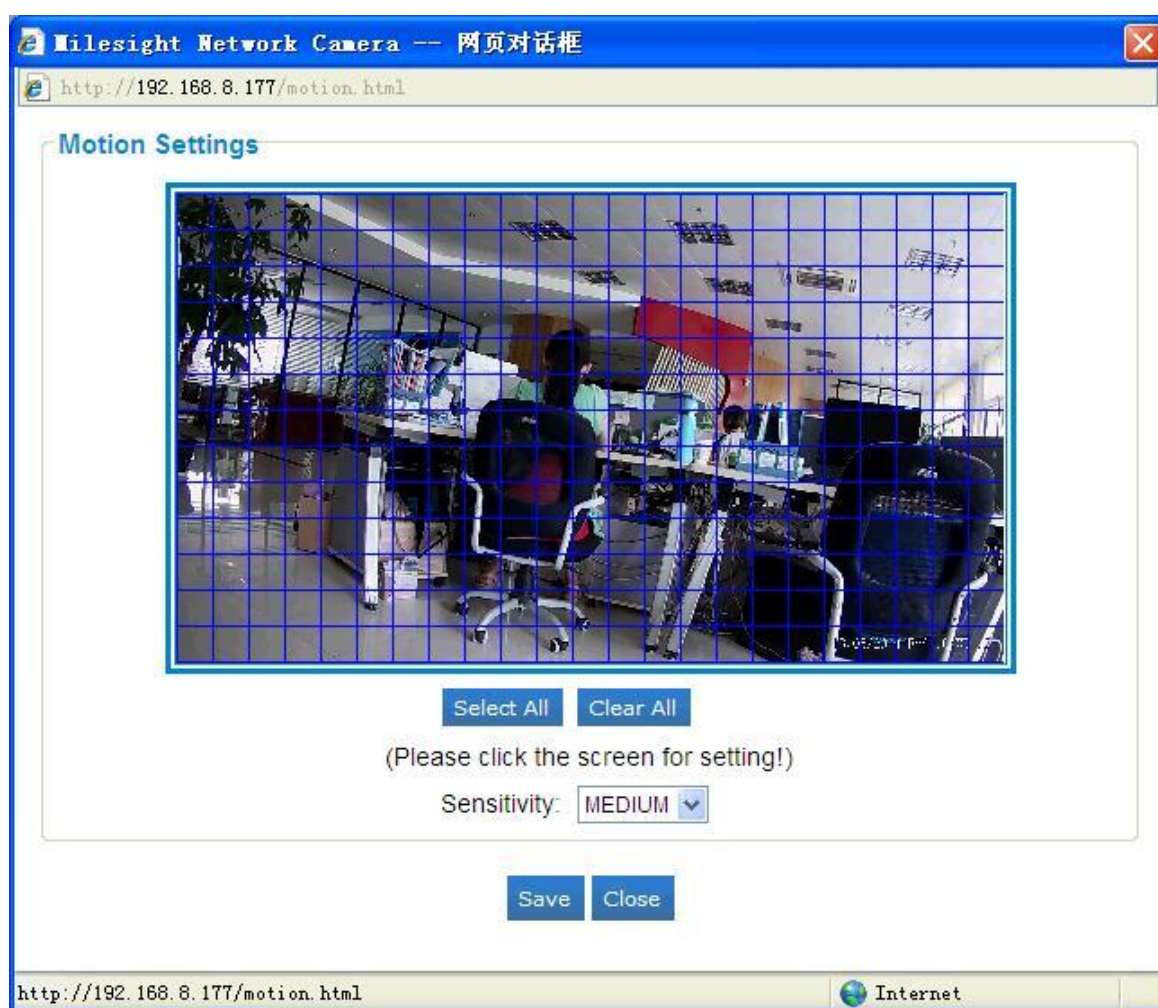


Figure 2-8 Motion Settings

Step1: Set the schedule for motion detection.



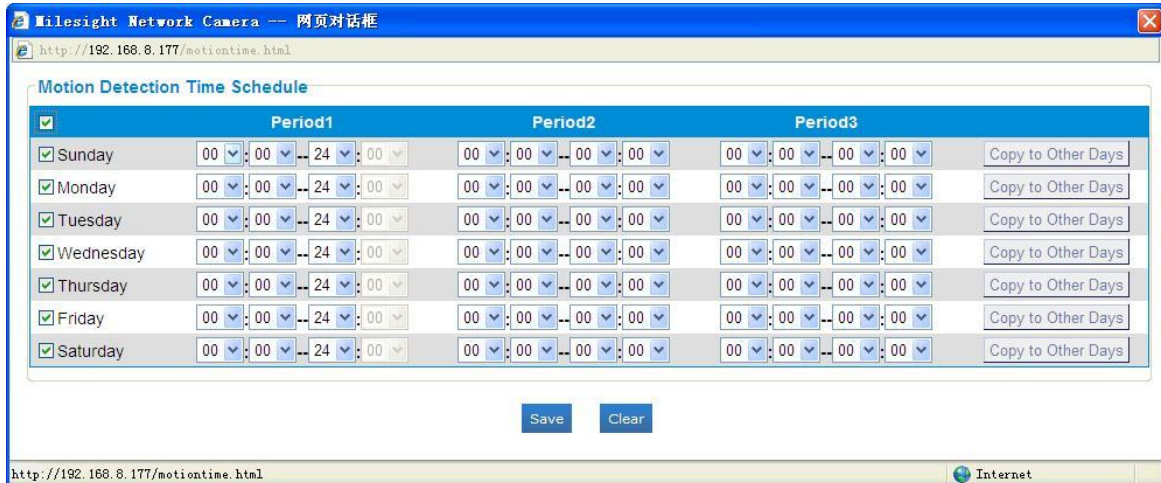


Figure 2-9 Motion Schedule

Step1: After motion detection successfully, you will see the tips on the live video page.

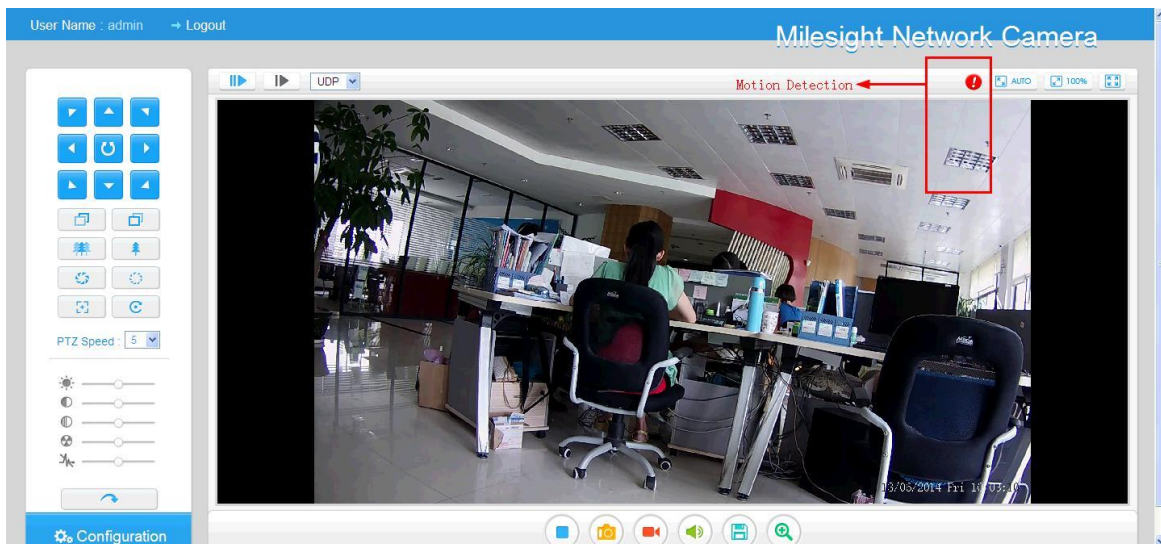


Figure 2-10 Motion Detection

## 2.3 How to auto delete files when SD card is full

### (1) Auto delete old files when it's full

Go to SD Card page and enable the 'Enable cyclic storage' option, then the SD card will auto delete the old files when it's full.

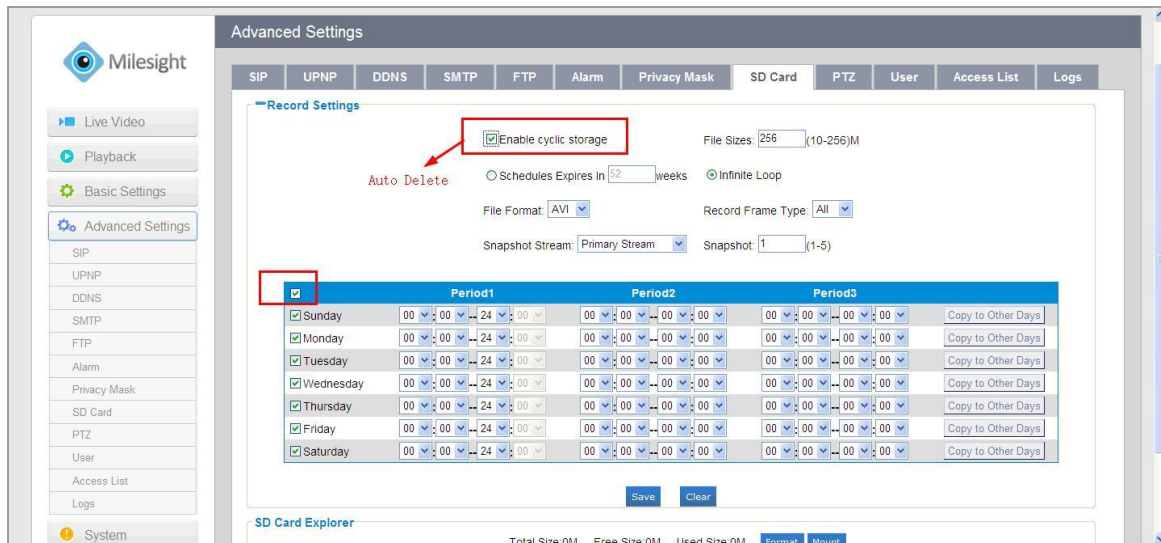


Figure 2-11 Delete on SD card

**(2) Access to SD Card via FTP**

Enter the <ftp://192.168.8.175>, then enter the user name and password.

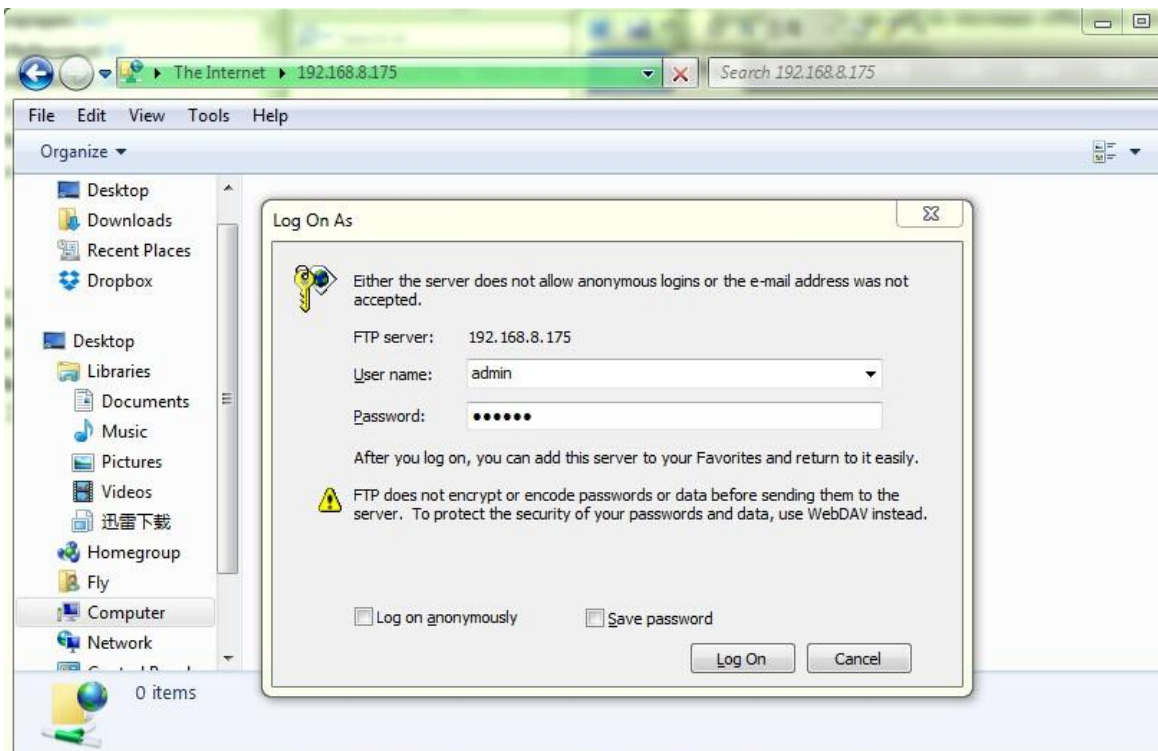


Figure 2-12 Access via FTP

All the files will list according to different date under the list:

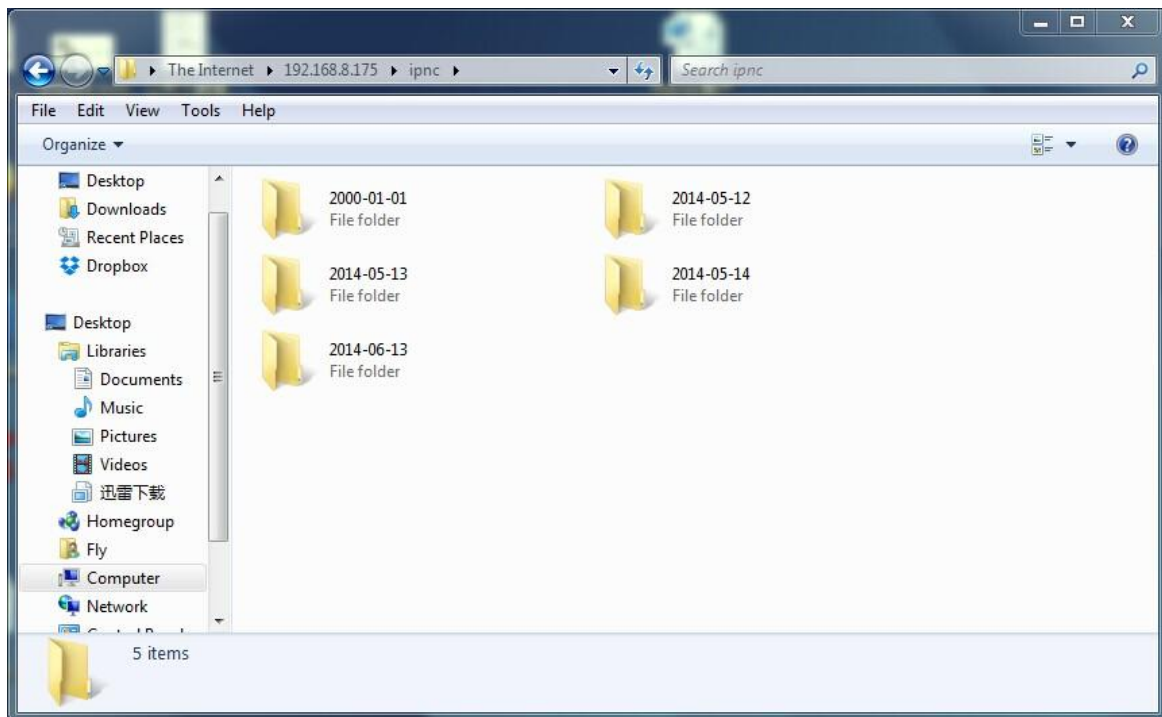


Figure 2-13 Access via FTP

### 3. Upgrade Firmware

Up to now, **we don't provide the firmware downloading from the web**, so if need to upgrade, please contact with our sales and support, not all the cameras use the same firmware, please refer to below:

MS-C26XX	MSFImage_11.4.0.73
MS-C23XX	MSFImage_12.4.0.73
MS-C21XX	MSFImage_15.4.0.73
MS-C36XX	MSFImage_21.4.0.73
MS-C33XX	MSFImage_22.4.0.73
MS-C32XX	MSFImage_26.4.0.73
MS-C35XX	MSFImage_27.4.0.73

Before upgrade, **please do remember to reboot the camera first**. For details, you can do as following steps.

Step 1: **Reboot the camera first**

Step 2: Go to the website of IP Camera, Configuration -> Maintenance -> Upgrade Firmware

Step 3: Browse and select files for the upgrade

Step 4: Click the "upgrade" button after it prompts with uploading file successfully. Then please wait about 1-3 minutes, after the system reboots successfully, the upgrade is done at last.

**Note:** For the new version, you need to re-install the Activex, during the install period, please close the browser, otherwise the Activex may not be installed correctly.

### 3.1 How to set the camera into factory settings

**Step 1:** Disconnect the power;

**Step 2:** Click on the reset button before power the camera, **press on it about 10s**, when the moment it's power, you will see a yellow LED light, and a red LED light, but the Red LED will go off about 1s, so after about clicking on the reset button, the Red LED will go on again, then you can leave the reset button, the camera will auto reboot again, please wait about 1-3 minutes;

**Step 3:** After auto reboot, you can use the IPTools to search out, the IP will turn into 192.168.5.190 again and then can use this Tool to modify to your local IP again.

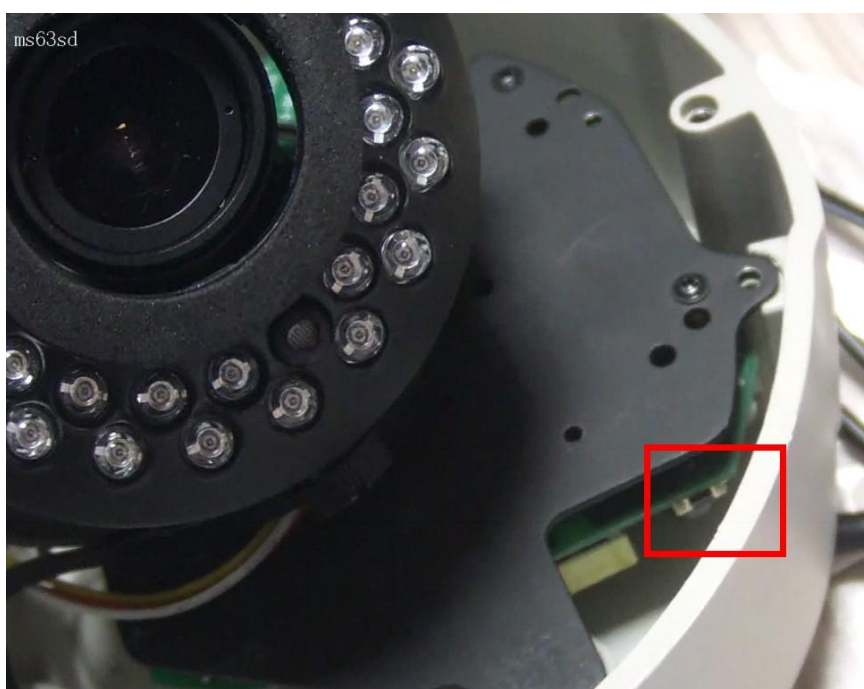


Figure 3-1 IR-Dome





Figure 3-2 Mini Dome

## 4. VMS

### 4.1 Difference between VMS Lite and VMS Pro

Milesight VMS Pro Use **Client/Server architecture**, so it will be able to add multiple servers, each server can support up to 36 cameras, so if more than 36, you need to use another server to add the cameras. Before activate you can only support up to 4 cameras on a server.

	Architecture	Live view	Playback	Others
VMS Lite	Client and server with one installation	only support up to 64 cameras	only one playback	1. Only record on local pc 2. Only support the motion detection on the VMS, cant trigger from the IPC
VMS Pro	Client/Server Architecture	support add multiple-server, one server for 36 cameras support for unlimited cameras	1. 4 ch Synchronized Playback; 2. up to 16 ch Asynchronous Playback	1. E-mail Notification/FTP 2. Customizable User Access Levels 3. Record locally or to network storage 4. Integrated Motion-Detection from camera 5. Multiple monitors support

Figure 4-1 Difference

Recommended Configuration:

(1) CPU:

16 Channels 2MP

3Ghz or faster && dual-core & 4 threads CPU

- 32Channels 2MP            3.2Ghz or faster && quad-core & 4 threads CPU
- 64 Channels 2MP            3.4Ghz or faster && quad-core & 6 threads CPU
- 128 Channels 2MP         3.6Ghz or faster && quad-core & 8 threads CPU

(2) Memory: 4G or more

(3) Network cable        Connect with Gigabit Lan

(4) Record storage

2048kbps    24hour     $(2M/8)*60*60*24)/1024=21G/pcs$

4096kbps    24hour     $(4M/8)*60*60*24)/1024=42G/pcs$

Note: Both VMS Lite and VMS Pro are free for our clients, if you want to remove the Watermark from the video, please ask the register code from Milesight.

## 4.2 How to access to VMS Pro from remote

VMS Pro support to view via remote control, you need to install the VMS Pro Client first, then add the server from remote, but you need to do the port mapping including:

**Server port/ Database port/RTSP port/FTP port** , then enter the public IP address of the server.

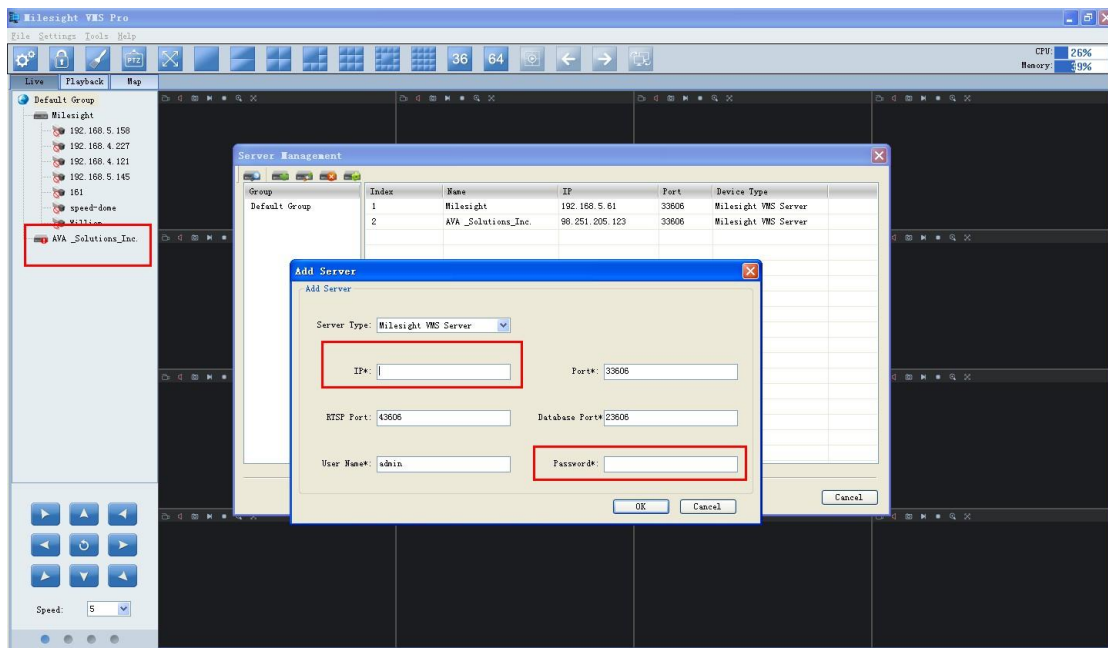


Figure 4-2 Add a new server

## 5. Other Common Questions

### 5.1 Image Blinking on live video

If the image on the web, on live video page will seem to blink, please do the settings like this:

Step1: Open the register;

Step2: **HKEY\_CURRENT\_USER\Software\MsActiveX\YUV**

Step3: Set the Value as 0. (1-YUV 0-RGB)

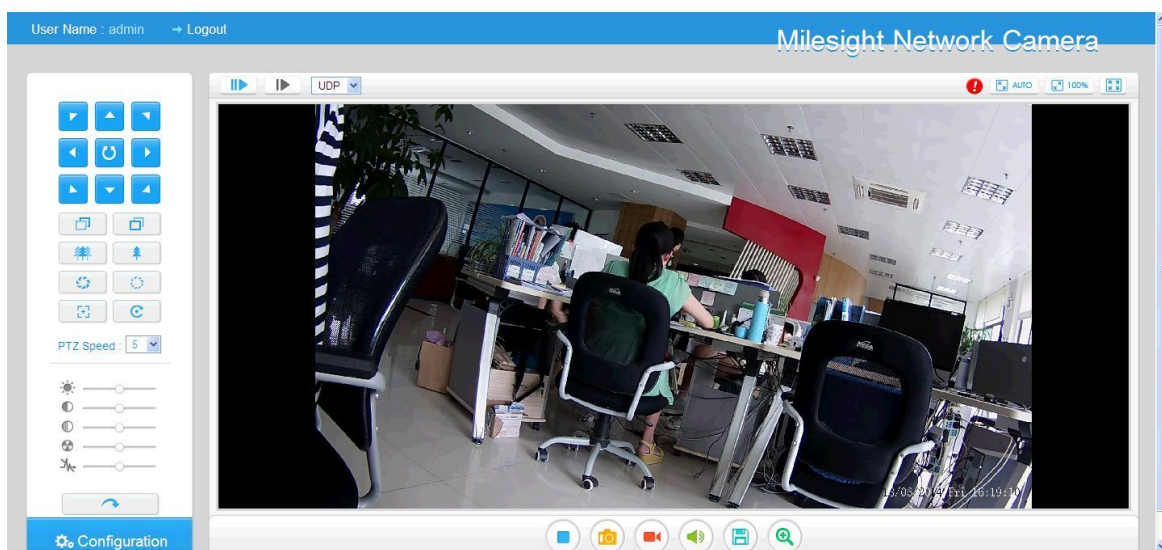


Figure 5-1 Live video

YUV is a color space typically used as part of a color image pipeline. It encodes a color image or video taking human perception into account, allowing reduced bandwidth for chrominance components, thereby typically enabling transmission errors or compression artifacts to be more efficiently masked by the human perception than using a "direct" RGB-representation. Other color spaces have similar properties, and the main reason to implement or investigate properties of Y'UV would be for interfacing with analog or digital television or photographic equipment that conforms to certain Y'UV standards.

### 5.2 How to find out the camera and change the IP

For Milesight camera, the default IP address is 192.168.5.190, the default user name is **admin**, and password is **ms1234**. So you can login with <http://192.168.5.190> . Or you need to change the IP address into your local IP first.

## 1. Assign a new IP for the camera

Step1: IPCTools is a software tool which can automatically detect multiple online Milesight network cameras connected in the LAN, set IP addresses, and manage firmware upgrades. It's recommended when assigning IP addresses for multiple cameras.

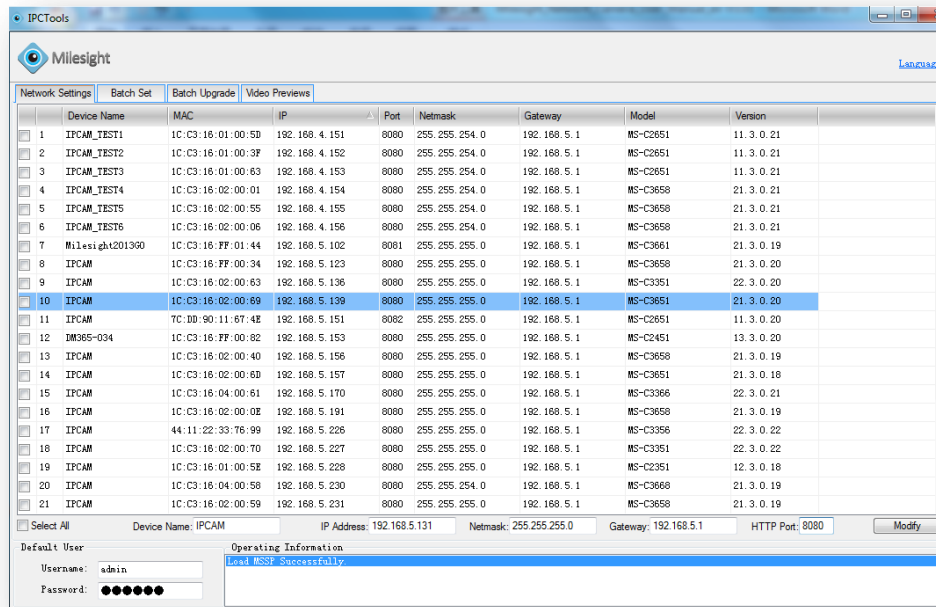


Figure 5-2 IPCTools

Step2: By double clicking the selected camera, you can access the camera via web browser directly. The Internet Explorer window will pop up.

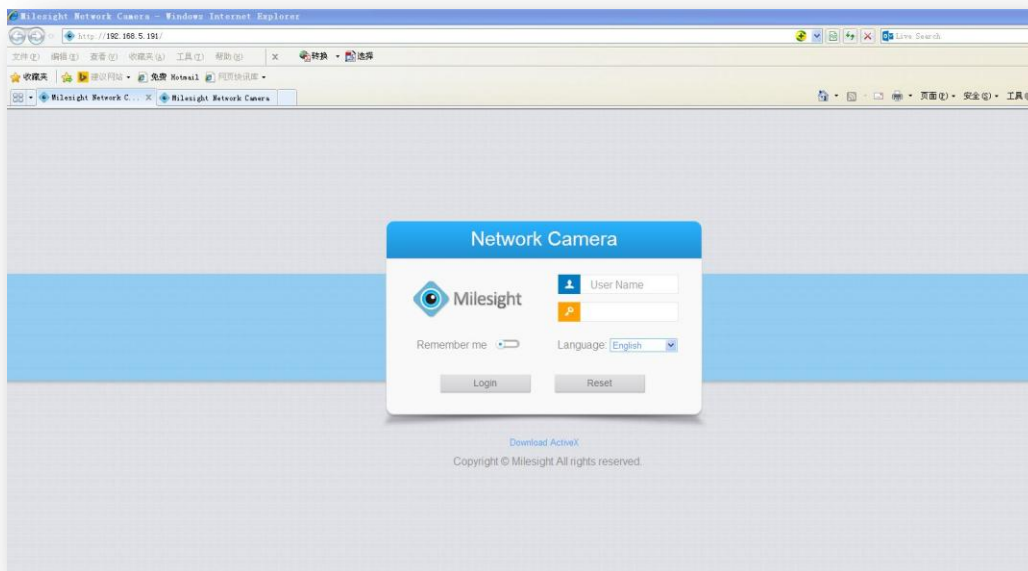


Figure 5-3 Log in



**Note:** IPCTools can't be used to search out the Speed Dome Series and Only for Milesight cameras, can't search out other brand camera.

**Download:**

<http://www.milesight.com/download.asp?BigClassName=Video-Software&Smallclassname=IPCTools>

## 2. AdminTools for Speed Dome Series

For Milesight Speed Dome Series, please use this tool to search out and change IP address at first.

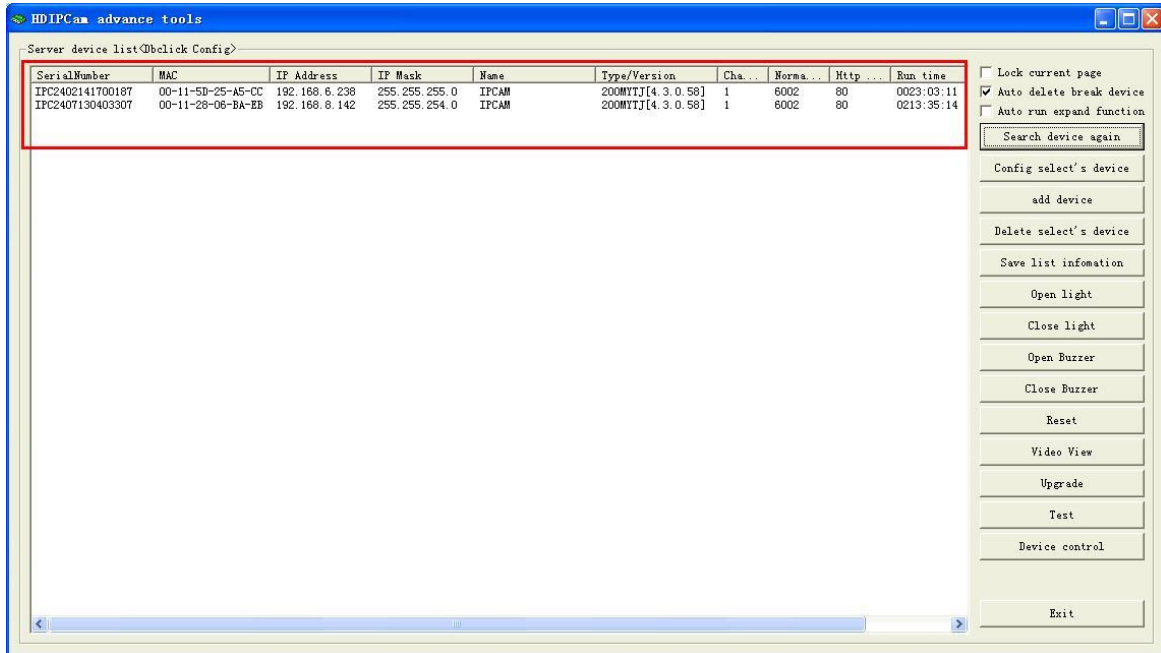


Figure 5-4 AdminTools

**Download:**

[https://www.dropbox.com/s/zg6c0m12l5syvn9/AdminTools for en.rar](https://www.dropbox.com/s/zg6c0m12l5syvn9/AdminTools%20for%20en.rar)

## 5.2 How to register a DDNS for camera

Up to now, Milesight camera can support for 4 DDNS server:

DDNS is running

Enable DDNS:

Provider: 

- dyndns.org
- freedns.afraid.org
- www.no-ip.com
- www.zoneedit.com

User Name:

Password:

Hash:

Host Name:

Figure 5-5 DDNS Server

Take for freedns.afraid.org as an example:

**Step1:** Log in <http://freedns.afraid.org> .

**Step2:** Click on the 'Sign Up'.

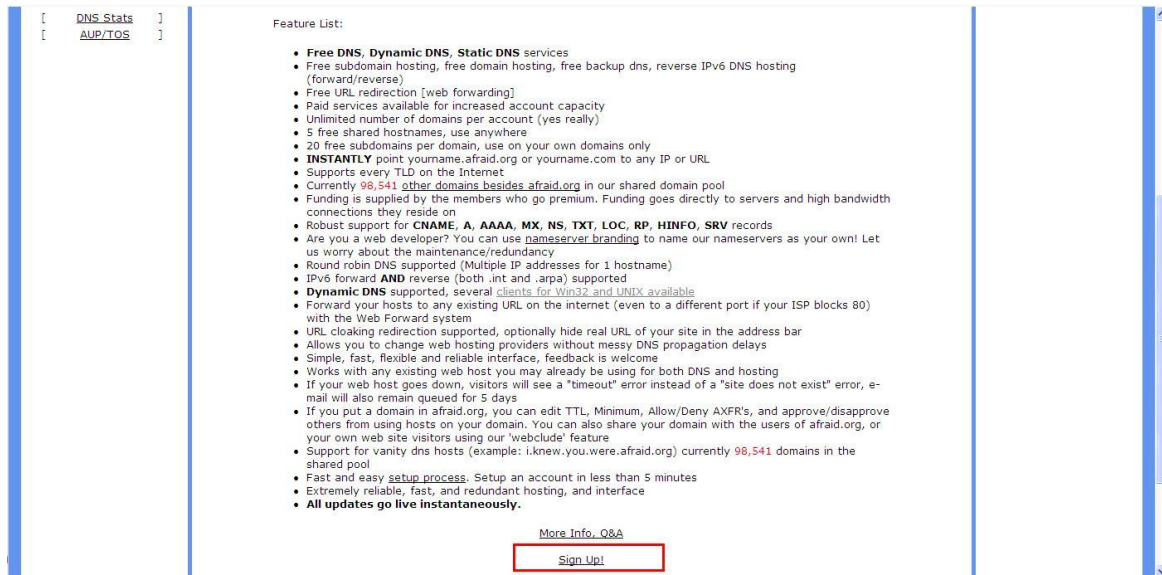


Figure 5-6 Sign Up

**Step3:** Create a new account under server.

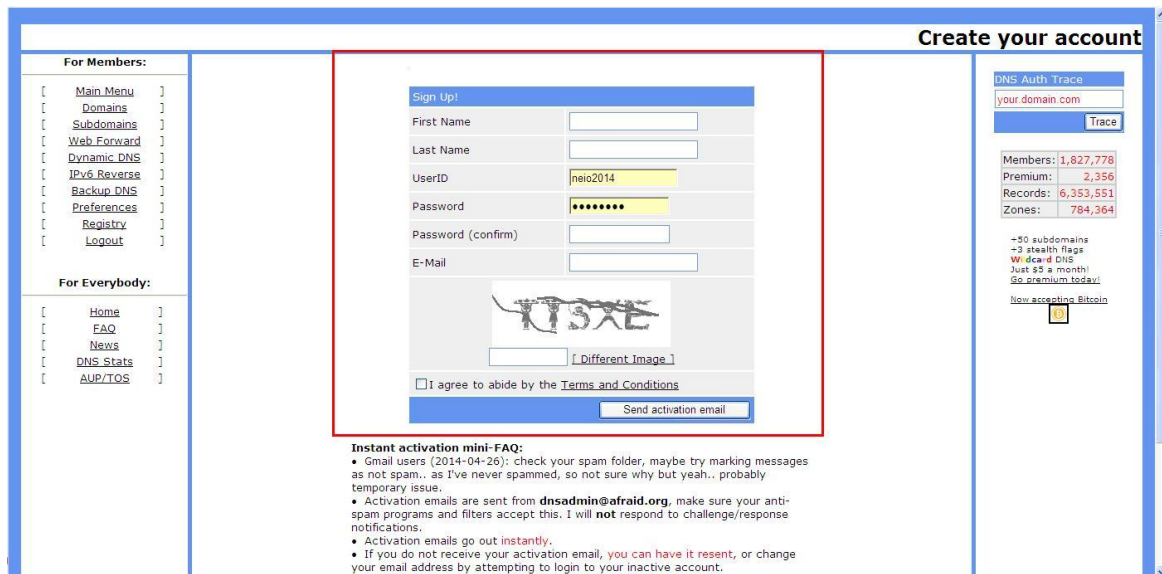


Figure 5-7 Add a new account

**Step4:** After register successfully, please activate the Email and then choose to add a new subdomain.

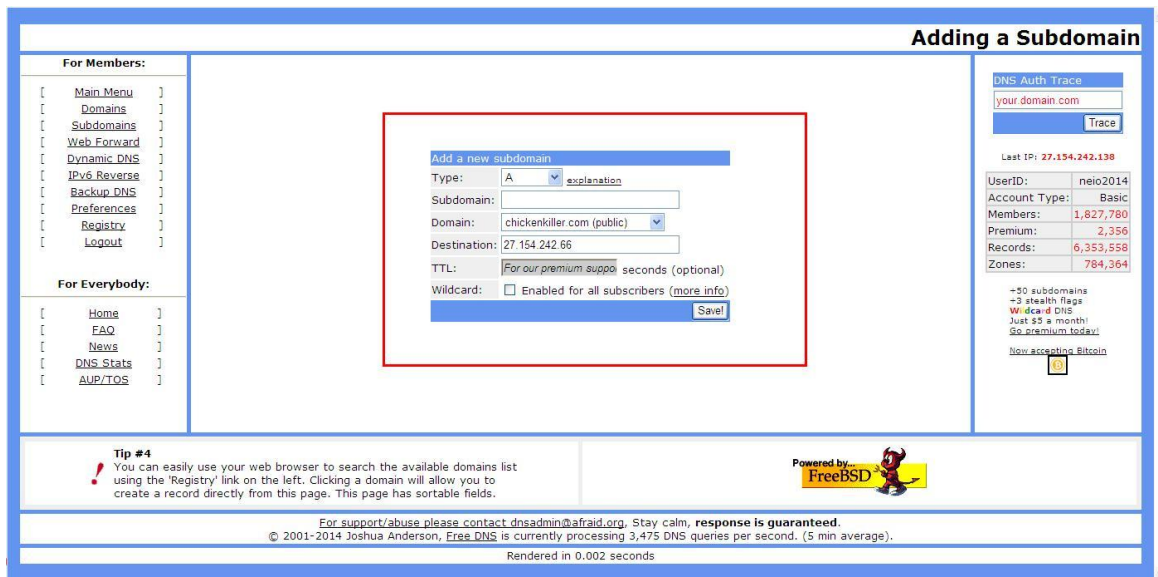


Figure 5-8 Add a new subdomain

**Step5:** After adding a subdomain, please check the HASH for this account. Click on 'Dynamic DNS' option, windows pop up like following:

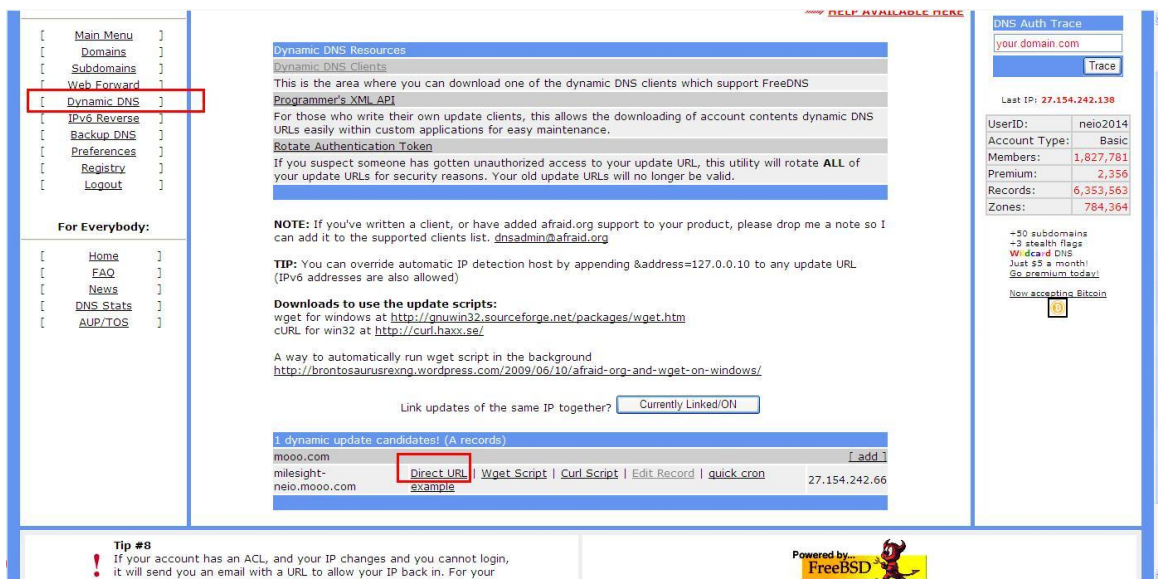


Figure 5-9 Direct URL

**Step6:** Click on the 'Directly URL'.

You can check HASH from the bellowing address:

'<http://freedns.afraid.org/dynamic/update.php?WjBhYnE2SmFabDIoTmVzUXpLTnFpa2I5OjExODg5MzYz>'

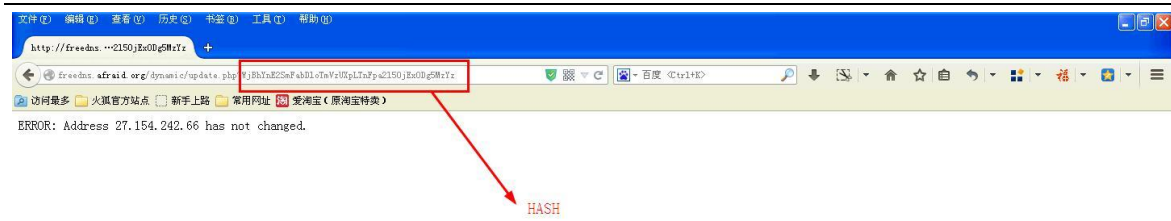


Figure 5-10 HASH

**Step7:** After done, enter the info on web, and the status would like this:

DDNS is running

Enable DDNS:	<input checked="" type="checkbox"/>
Provider:	<input type="text" value="freedns.afraid.org"/>
User Name:	<input type="text" value="freedns.afraid.org"/>
Password:	<input type="text" value="www.no-ip.com"/>
Hash:	<input type="text" value="WjBhYnE2SmFabDloTmVzUj"/>
Host Name:	<input type="text" value="milesight-neio.mooc.com"/>

Figure 5-11 DDNS Status

[Finish]