

# LPR IP camera

## User manual



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The camera adopts 2.1 Mega Pixel 1/2.8" SONY Exmor progressive scan CMOS sensor, featured WDR, low illumination, high definition. Special LPR technology applied: Highlight Compression (HLC) adjustable, multi-section shutter speeds, LED illuminators brightness adjustable, AGC adjustable, digital display setting, automatic snapshot and FTP upload, etc. Easy setting: no need professionals, no need client software. Manual setting all the function on control board inside camera. Connect NVR or computer, playback video, pause and see license plates clearly.

## **1. Features:**

1. 2.0mega pixel SONY Exmor CMOS sensor, progressive scan, WDR, low illumination, high definition
2. Embedded intelligent algorithms for best viewing license plate day and night.
3. ONVIF protocol, GB28181 protocol, compatible with main NVR manufacturer, Hikvision, Dahua, etc.
4. HLC (highlight compression) function, auto shift from daytime setting mode to night setting mode. Good anti-headlights night effect.
5. WDR adjust
6. 1-3 lanes surveillance.
7. Shutter speed adjustable: 6 traffic modes selectable: 30KM/H, 60KM/H, 90KM/H,120KM/H,150KM/H,180KM/H standard mode
8. Easy setting: no need professionals, no need client software. Manual setting all the function on control board inside camera. Connect NVR or computer, playback video, pause and see license plates clearly.  
Varifocal lens: f=6-22mm
9. 1.8 Inch LCD display menu: LED luminance value, HLC intensity, AGC value, current traffic mode...ETC
10. 4 PCS white bright lights.Color image at night. Night vision distance <20 M. Luminance Add + / decrease-, adjustable no matter in daytime or at night. Auto shift from daytime setting mode to night setting mode.
11. IP66, waterproof. . High quality double shield housing.Heater, FAN Option
12. Support auto snapshot number plates when connection with inductive loops, etc trigger. Snapshot JPG images store in TF card (max.32G) and/or FTP server. (TF card excluded).
13. double front glasses to avoid light halo and spot when LED is ON.
14. IR illuminator option, black & white image at night.

**Applicable in: freeway, city road, country road, entrance/exit of community, school, hospital, industrial park, parking lot or garage, toll gate, etc. Surveillance place**

## 2. Technical Parameter

Model:		NST-IPH6092NPSD
Video	Sensor	1/2.8 " SONY 2.1 Mega pixel Exmor progressive CMOS sensor
	Resolution max.	Full HD/1080P(1920x1080) + Full D1
	Min. illumination	color: 0.05 Lux at F1.2 / LED illuminator ON: 0.001Lux at F1.2
	WDR	Y
	video codec	H.264 Main Profile @ Level 4.1 / Motion JPEG
	streams	FHD/1080P + Full D1
	Frame rate	25 fps / 30fps
	video stream	H.264& M-JPEG video stream: video out multichannel video at max. Resolution. Frame rate and video steam adjustable,H.264 support VBR/CBR
	16: 9 display	support
	ROI	Y
	Lens	f= 6-22 3MP fixed lens
Network	Network port	1 RJ45, 10/100M self adaptive Ethernet port, 1 BNC, 1 power supply port
	network protocol	IPv4, TCP/IP, UDP, HTTP, DHCP, RTP/RTCP/RTSP, FTP, UPnP, DDNS, NTP, IGMP, ICMP ,etc
	access agreement	WEB, SDK API, ONVIF
Storage	video	PC or NVR
	Snapshot images	TF card and/or FTP upload
General	OS	Microsoft Windows XP/Windows 7/IE: Microsoft Internet Explorer 6.x or above
	Video out	1.0Vp-p,75Ω
	Power supply	DC12V
	Operating temperature	-10℃—50℃
	N.W. (approx.)	2.5KG

### 3. Installation and setting

3.1 Connect DC12V power supply, if the upper casing is open, the indicator light is on

3.2 When the image appears in the monitor, adjust the focus and Iris to get clear image. Surveillance area: max. 5-8 meters wide.

3.3 Digital display: current traffic mode and its parameters.

To select various traffic mode by Rocker Switch UP or DOWN. The indicator is ON for the selected traffic mode. Five traffic modes following:

License plate camera parameters control on LCD display (menu) and left and right (parameter setting keys)

3.3.1 License plate camera setting environment mode: Parking mode, Road mode. Factory default: Parking mode.

3.3.2 Support speed: 30km / h, 60km / h, 90km / h, 120km / h, 150km / h, 180km / h, the Factory default: 30km / h

3.3.3 HSBLC 4 levels: Auto, Low mode, Mid mode, High mode, The higher mode Factory default: Mid mode

3.3.4 WDR 4 levels: Closed, Low mode, Mid mode, High mode, The higher mode Factory default: Auto

3.3.5 Environmental Brightness 4 levels: Auto, Low mode, Mid mode, High mode, The higher mode Factory default: Low mode

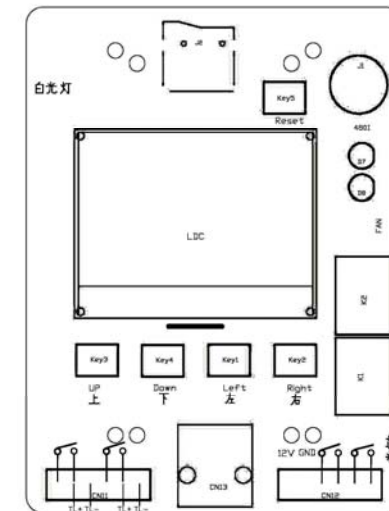
3.3.6 Light brightness, 13 levels adjustable, users can make adjustments with the actual effect of the plate according to site

3.3.7 The photosensitive start value, the photosensitive start values are 13 adjustable, the value greater, the brightness darker. Factory default: 7 Level

3.3.8 3D Noise Reduction 4 levels: Auto, Low mode, mid mode, High mode, the higher mode Factory default: Auto

3.3.9 Language: Chinese, English. Factory default: English

3.4 NVR access protocol: ONVIF, port: 8080



## 4. Login and Function Setting

### 4.1 Login

Connect PC or NVR via internet for live view or recording when finish setting.

Using main Browsers (e.g.: IE browser)

Default Factory IP Address: 192.168.1.10

Default Factory User Name: admin

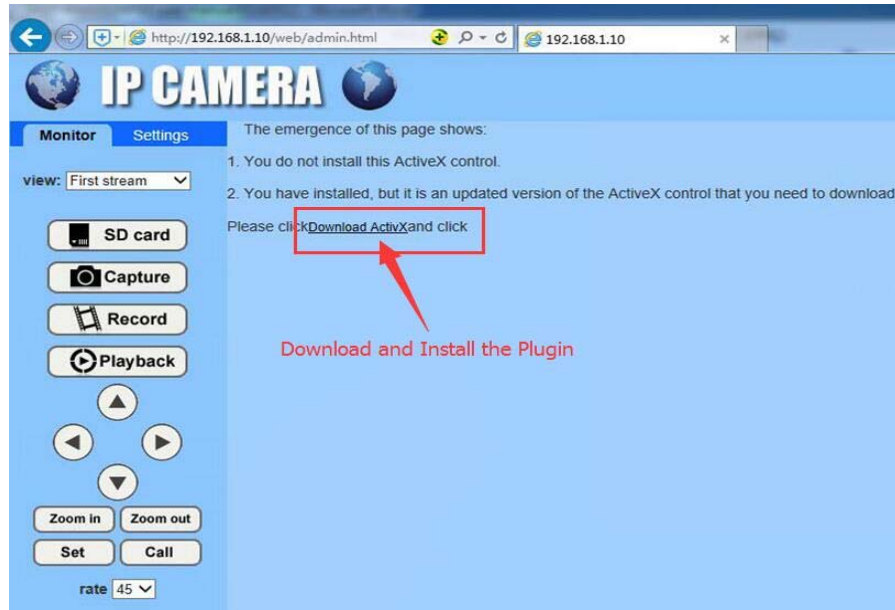
Default Factory Password: admin

Step A: (Ref. P4.1-1) “Input IP Address – Fill in user and password – OK”



(P4.1-1)

Step B: (Ref. P4.1-2) Download and install the “ActiveX” plug-in



(P4.1-2)

Step C: (Ref P4.1-3) “ English – PC View”



(P4.1-3)

## 4.2 TF Card Format & Browser

Step: (Ref P4.2-1) "Settings - System – Device Information – Format SD Card as FAT32 – Browser SD Card"

Tip: This step is very important. SD Card formatted as your first using.

The screenshot displays the IP CAMERA web interface. The browser address bar shows the URL <http://192.168.1.10/web/admin.html>. The interface has a blue header with the 'IP CAMERA' logo. A left sidebar contains navigation tabs: Monitor, Settings (highlighted with a red box and '1'), Media (with a '1'), Network, Alarm, Advanced, System, Time, Initialize, Device information (highlighted with a red box and '2'), and System Log (with a '2'). The main content area is titled 'Device information' and lists various system parameters in a table-like format. The 'SD status' row is highlighted with a red box and a '4', showing 'Card free space: 29656MB total space: 29656MB'. Below this row, two buttons are highlighted with red boxes and a '3': 'Browser SD Card...' and 'Format SD Card as fat32'. A green 'Unplug' link is also visible next to the 'Format SD Card as fat32' button.

Parameter	Value
Device ID:	IPCAM
Device Type:	C6F0SgZ3N0P0L0
Network connection:	LAN
Current Client:	2
Software Version:	V6.1.1.2.1-20150909
Webware Version:	V1.0.1
Mac address:	00-E0-F8-22-11-8F
IP address:	192.168.1.10
Subnet mask:	255.255.255.0
Gateway:	192.168.1.1
Primary DNS:	192.168.1.1
Secondary DNS:	
UPnPstatus:	Failed
Manufacture's DDNS status:	Noenable
Third Party DDNS status:	Noenable
Start Time:	2016-05-12 08:21:29
SD status:	Card free space: 29656MB total space: 29656MB

(Ref P4.2-1)



## 4.3 Media Setting

Media Setting is including: Video Setting, Image Setting, Audio Setting

### 4.3.1 Video Setting

Steps: (Ref. P4.3.1-1) “Settings – Media - Video”

Tip1: You can set the camera name, vide resolution, stream, frame rate and etc.

192.168.1.10/web/admin.html

# IP CAMERA

Monitor Settings

Media  
Video  
Image  
Audio

Network  
Alarm  
Advanced  
System

### Video settings

Video format: 50Hz  
Video Coding: mainprofile

**First stream**

Resolution: 1920x1080  
Bit rate: 4096 kbps (32-8192)  
Maximum frame rate: 25 fps  
Key frame interval: 50 (2-150)  
Bit rate control:  CBR  VBR  
Image quality: 1 (The smaller the value, the better the image quality, larger flow control)

**Second stream**

Resolution: 640x352  
Bit rate: 512 kbps (32-8144)  
Maximum frame rate: 25 fps  
Key frame interval: 50 (2-150)  
Bit rate control:  CBR  VBR  
Image quality: 1 (The smaller the value, the better the image quality, larger flow control)

**Third stream**

Resolution: 320x176  
Bit rate: 256 kbps (32-8144)  
Maximum frame rate: 25 fps  
Key frame interval: 50 (2-150)  
Bit rate control:  CBR  VBR  
Image quality: 1 (The smaller the value, the better the image quality, larger flow control)

**Mobile picture resolution**

Resolution: 320x176

**Parentheals Options**

Time Stamp:  On  Off  
Camera name:  On  Off  
Camera name: IP Camera

Apply Cancel

(P4.3.1-1)

### 4.3.2 Image Setting

Steps: (Ref. P4.3.2-1) "Settings – Media - Image"

Tip1: You can set the image quality, WDR, IR and etc.

192.168.1.10/web/admin.html

IP CAMERA

Monitor Settings

Media  
Video  
Image  
Audio

Network  
Alarm  
Advanced  
System

Image settings

connected

Mode: ColorMode

Brightness: 50

Saturation: 115

Contrast: 50

Sharpness: 87

Baoguang: 64

Gamma: 1

Distortion: 0

Flip  Mirror

WDR

Aemode: Auto

Immode: Frame rate

IR LED Control: Auto

IRCut: 250 (1-1024, the late value, the greater the switching time)

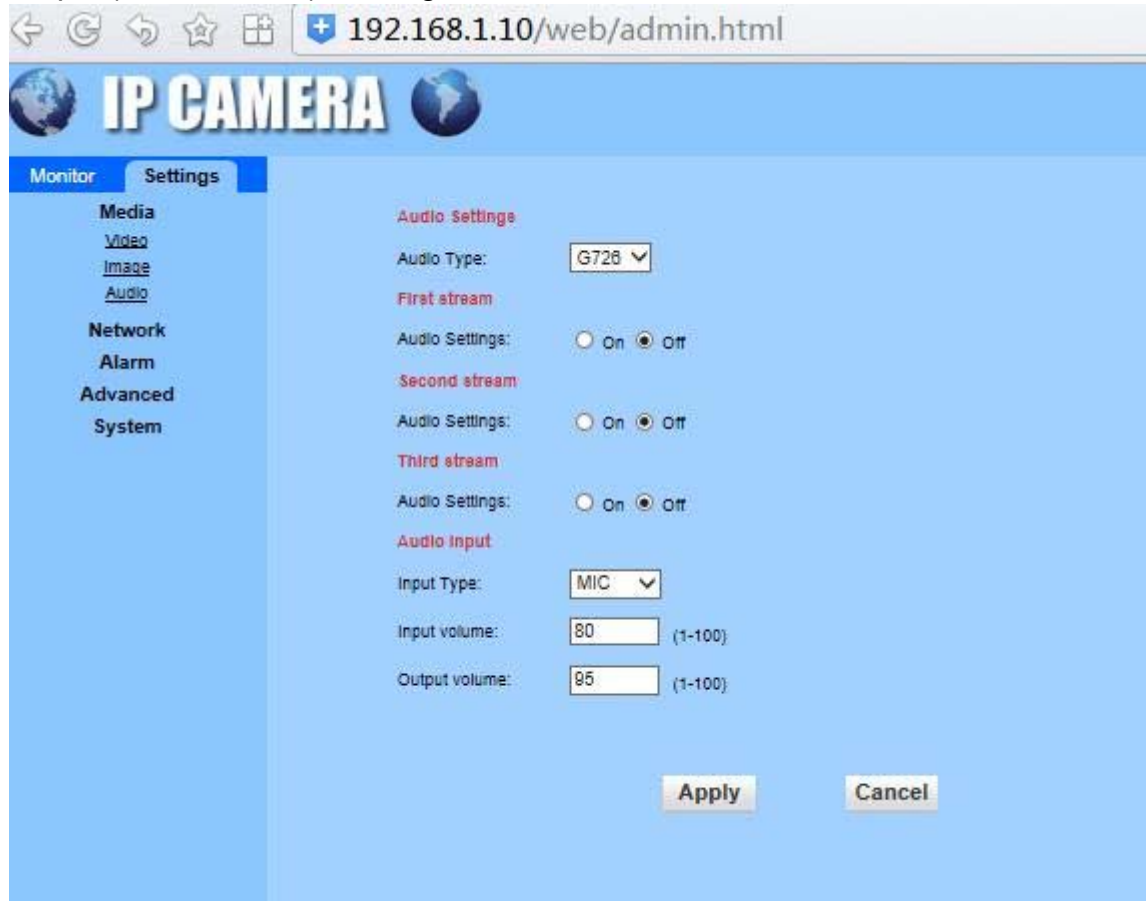
Noise: 0 (0-100, Lower according to the work)

Apply Cancel Default

(P4.3.2-1)

### 4.3.3 Audio Setting

Steps: (Ref. P4.3.3-1) "Settings – Media - Audio"



The screenshot shows a web browser window with the address bar displaying "192.168.1.10/web/admin.html". The page title is "IP CAMERA". The interface is divided into a left sidebar and a main content area. The sidebar has two tabs: "Monitor" and "Settings", with "Settings" selected. Under "Settings", there are sub-menus for "Media", "Network", "Alarm", "Advanced", and "System". The "Media" menu is expanded, showing "Video", "Image", and "Audio" options. The "Audio" option is selected, leading to the "Audio Settings" page. The main content area has a blue background and contains the following settings:

- Audio Settings**: Audio Type: G728 (dropdown menu)
- First stream**: Audio Settings:  On  Off
- Second stream**: Audio Settings:  On  Off
- Third stream**: Audio Settings:  On  Off
- Audio Input**: Input Type: MIC (dropdown menu)
- Input volume: 80 (range 1-100)
- Output volume: 95 (range 1-100)

At the bottom of the settings area, there are two buttons: "Apply" and "Cancel".

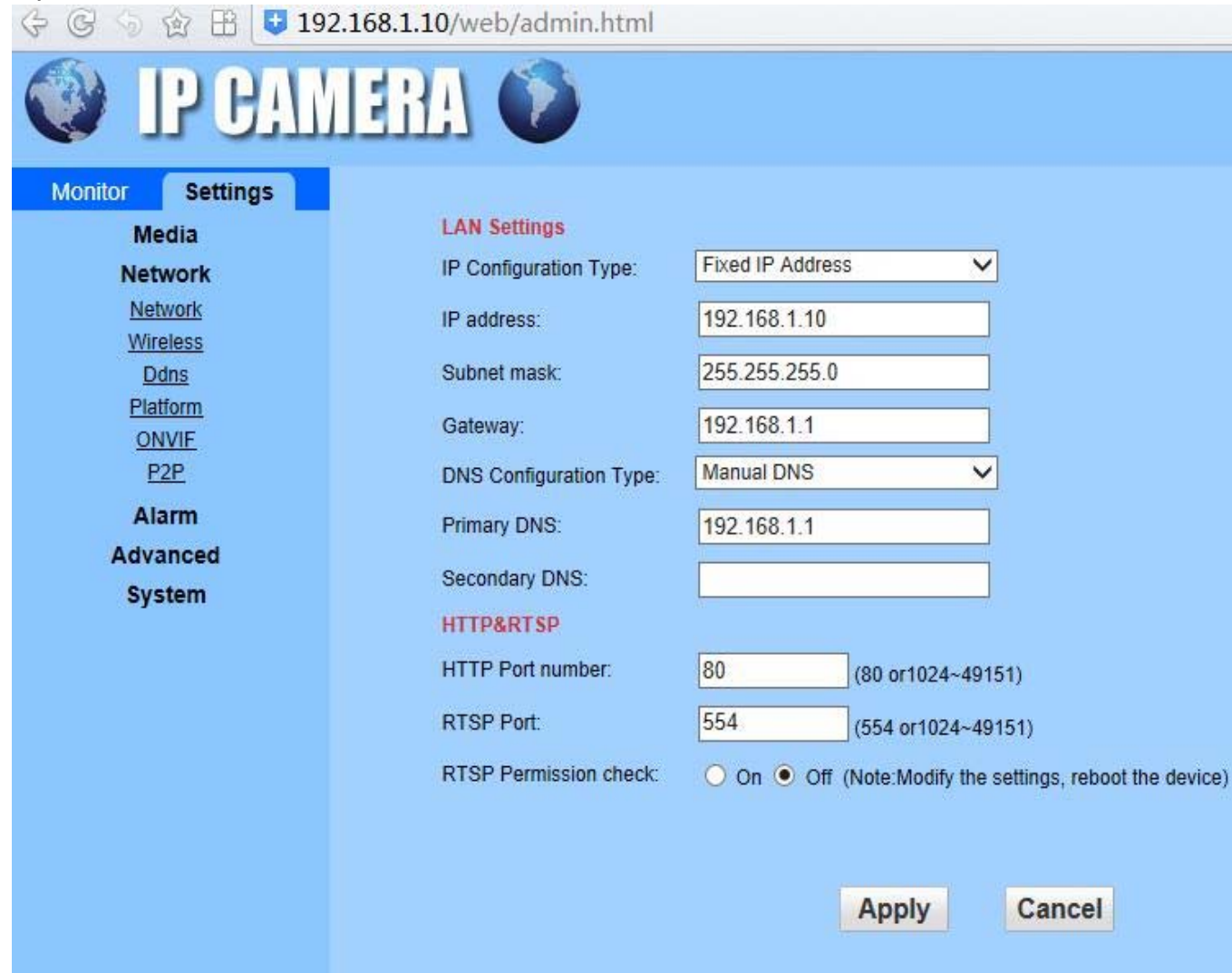
(P4.3.3-1)

## 4.4 Network Setting

### 4.4.1 Network

Steps: (Ref. P4.4.1-1) “Settings – Network - Network”

Tip1: You can set the main network IP and HTTP & RTSP information here.



The screenshot shows a web browser window with the address bar displaying "192.168.1.10/web/admin.html". The page title is "IP CAMERA" with a globe icon on either side. The navigation menu on the left includes "Monitor" and "Settings". Under "Settings", there are sub-menus for "Media", "Network", "Wireless", "Ddns", "Platform", "ONVIF", "P2P", "Alarm", "Advanced", and "System". The "Network" sub-menu is selected, and the "LAN Settings" section is visible. The settings are as follows:

LAN Settings	
IP Configuration Type:	Fixed IP Address
IP address:	192.168.1.10
Subnet mask:	255.255.255.0
Gateway:	192.168.1.1
DNS Configuration Type:	Manual DNS
Primary DNS:	192.168.1.1
Secondary DNS:	

HTTP&RTSP	
HTTP Port number:	80 (80 or 1024~49151)
RTSP Port:	554 (554 or 1024~49151)
RTSP Permission check:	<input type="radio"/> On <input checked="" type="radio"/> Off (Note: Modify the settings, reboot the device)

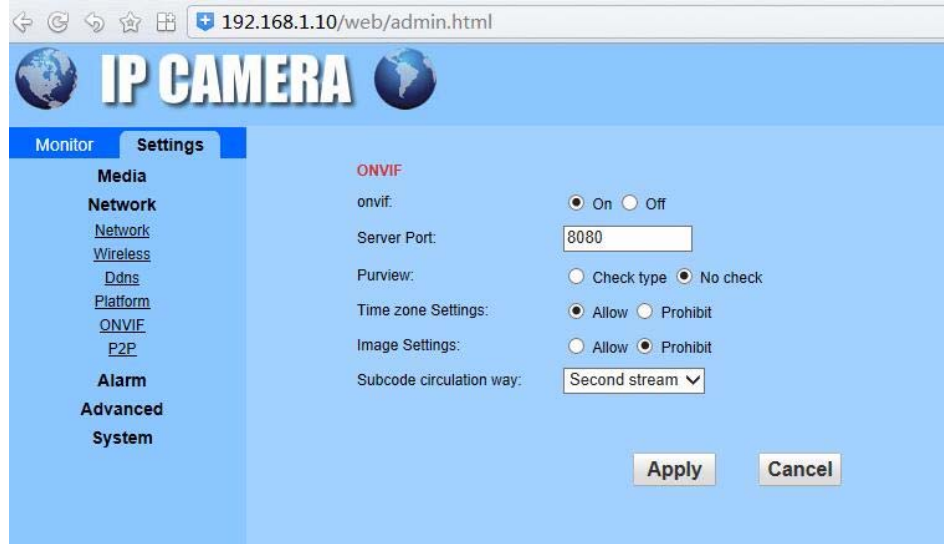
At the bottom of the settings area, there are two buttons: "Apply" and "Cancel".

(P4.4.1-1)

#### 4.4.2 ONVIF

Steps: (Ref P4.4.2-1) “Settings- Network- ONVIF”

Tip1: You can enable the ONVIF here and the port is 8080

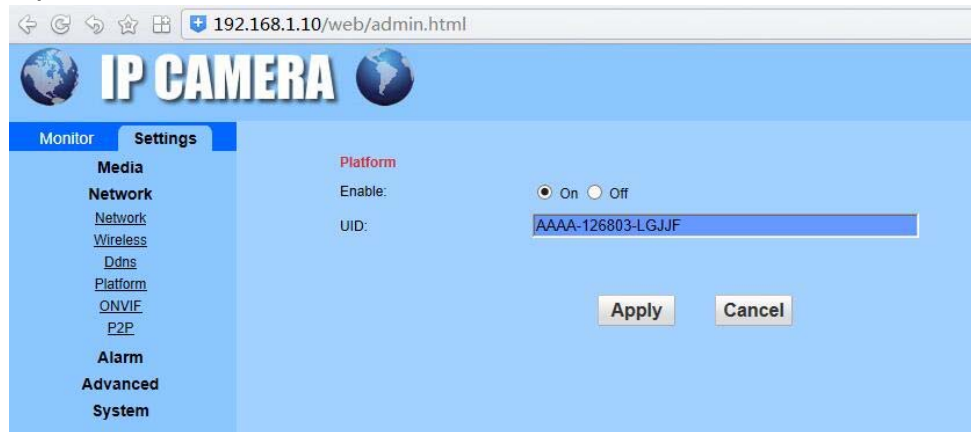


(P4.4.2-1)

#### 4.4.3 P2P

Steps: (Ref P4.4.3-1) “Settings- Network-P2P”

Tip1: This is a function to allow mobile devices to access.

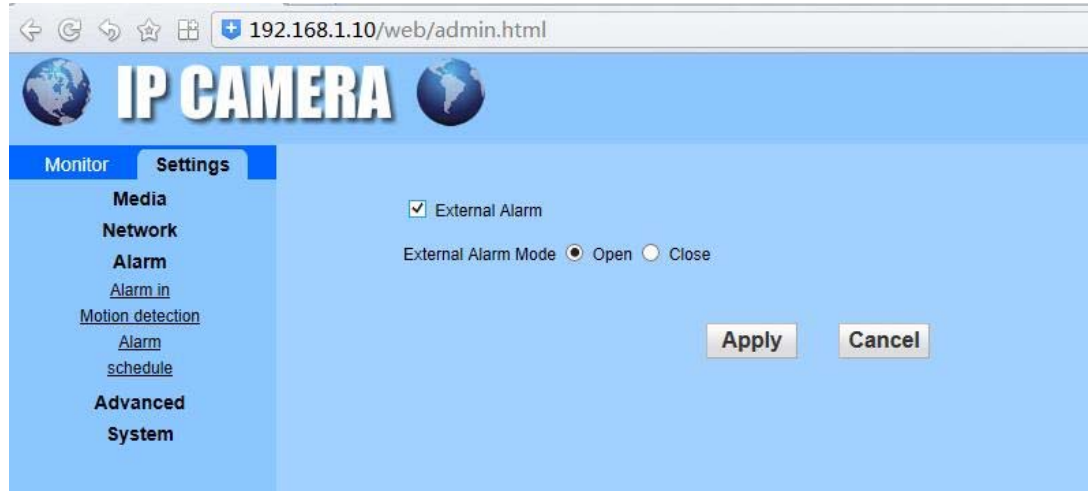


(P4.4.3-1)

## 4.5 Alarm Setting

### 4.5.1 Alarm in

If you will add external alarm system, please enable it. If no need, leave it. (P4.5.1-1)



(P4.5.1-1)

### 4.5.2 Motion Detection Setting

Steps: (Ref. P4..5.2-1) "Settings – Alarm – Motion detection – Window – Sensitivity - Apply"

Tip1: You can choose 1-4 windows and you can move the detection area by mouse

Tip2: You can set the sensitivity by moving the bar, will show the specific sensitivity by below.

http://192.168.1.10/web/... 192.168.1.10/web/admin.html 360搜索

# IP CAMERA

Monitor **Settings** 1

- Media
- Network**
- Alarm** 2
  - Alarm in
  - Motion detection** 3
    - Alarm
    - schedule
- Advanced
- System

IP Camera 2016-05-11 16:53:28



connected

4

Window	Sensitivity
<input checked="" type="checkbox"/> Window1	95 6
<input checked="" type="checkbox"/> Window2	50
<input checked="" type="checkbox"/> Window3	50
<input checked="" type="checkbox"/> Window4	50

5

7 Apply

(Ref. P4.5.2-1)

### 4.5.3 Alarm Setting

Steps: (Ref. P4.5.3-1) “Settings – Alarm – Alarm – Email Alarm – Picture FTP – Picture SD Card – Image number - Apply”

Tip1: You can choose E-mail Alarm, E-mail setting please refer to: **4.6.3**

Tip2: You can choose FTP saving picture, FTP Server Setting please refer to: **4.6.4**

Tip3: You can save the picture on SD Card

Tip4: You can choose the number of image capture 1 or 2 or 3.

The screenshot shows the IP CAMERA web interface. The browser address bar displays "192.168.1.10/web/admin.html". The page title is "IP CAMERA". The navigation menu on the left includes "Monitor", "Settings 1", "Media", "Network", "Alarm 2", "Alarm in", "Motion detection", "Alarm 3", "Schedule", "Advanced", and "System". The main content area is titled "Linkage set" and contains the following options:

- E-mail Alarm and Send with Picture (with a link to "Email Setting")
- Save Picture on the FTP Server (with a link to "FTP Server Setting")
- Save Video on the FTP Server
- Relay out (5 sec)
- Save Picture on the SD Card
- Save Video on the SD card

The "Image capture" section has a dropdown menu with options 1, 2, and 3. At the bottom, there are "Apply 5" and "Cancel" buttons.

(P.4.5.3-1)

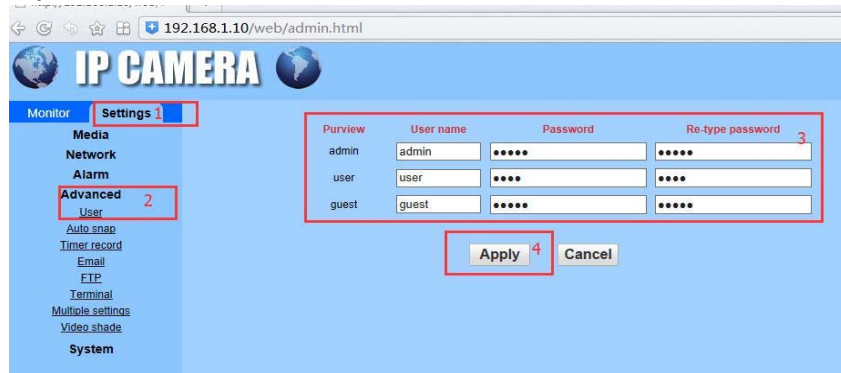


## 4.6 Advanced Settings

### 4.6.1 User Setting

Steps: (Ref P4.6.1-1) “Settings – Advanced – User – Setting- Apply”

Tip1: You can set user account for: Admin, User, Guest.



The screenshot shows the IP CAMERA admin interface. The browser address bar displays "192.168.1.10/web/admin.html". The page title is "IP CAMERA". The left sidebar contains a menu with "Settings 1" highlighted. Under "Settings 1", "Advanced 2" is selected, and "User" is highlighted. The main content area shows a table for user settings:

Purview	User name	Password	Re-type password
admin	admin	.....	.....
user	user	....	....
guest	guest	.....	.....

Below the table are "Apply 4" and "Cancel" buttons.

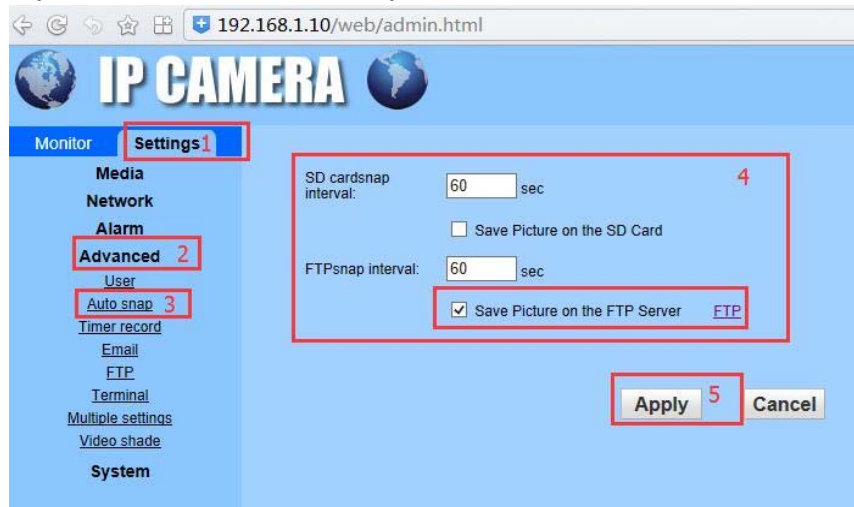
(P4.6.1-1)

### 4.6.2 Auto Snap

Steps: (Ref P4.6.2-1) “Settings – Advanced – Auto Snap –Setting - Apply”

Tip1: You can set to save picture on SD Card and the time frequency.

Tip2: You can set to save picture on FTP Server and the time frequency. FTP Server Setting Refer to: 4.6.4



The screenshot shows the IP CAMERA admin interface. The browser address bar displays "192.168.1.10/web/admin.html". The page title is "IP CAMERA". The left sidebar contains a menu with "Settings 1" highlighted. Under "Settings 1", "Advanced 2" is selected, and "Auto snap 3" is highlighted. The main content area shows the following settings:

SD cardsnap interval: 60 sec

Save Picture on the SD Card

FTPSnap interval: 60 sec

Save Picture on the FTP Server [FTP](#)

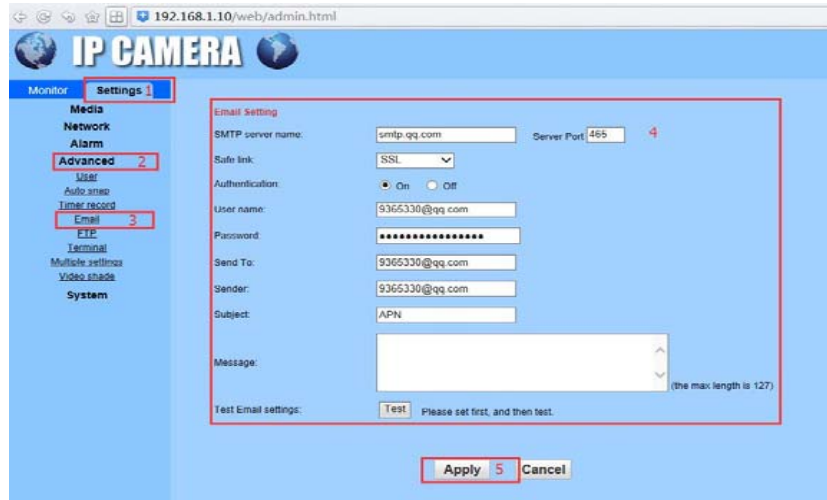
Below the settings are "Apply 5" and "Cancel" buttons.

(P4.6.2-1)

### 4.6.3 E-mail Alarm Setting

Steps: (Ref. P4.6.3-1) “Settings- Advanced – Email- Fill in the SMTP information – Test - Apply”

Tip1: For SMTP information please inquiry with your email provider.



The screenshot shows the 'Email Setting' configuration page in the IP CAMERA web interface. The left sidebar contains a menu with 'Settings' selected and 'Advanced' highlighted with a red box and the number '2'. The 'Email' option is also highlighted with a red box and the number '3'. The main content area is titled 'Email Setting' and contains the following fields:

- SMTP server name: smtp.qq.com
- Server Port: 465
- Safe link: SSL
- Authentication: On
- User name: 9365330@qq.com
- Password: [Redacted]
- Send To: 9365330@qq.com
- Sender: 9365330@qq.com
- Subject: APN
- Message: [Empty text area]

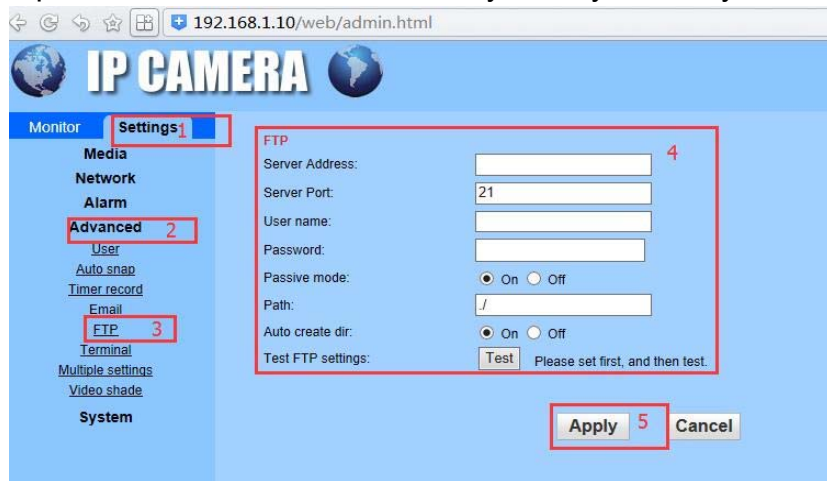
At the bottom of the form, there is a 'Test' button and a 'Please set first, and then test.' message. Below the form, there are 'Apply' and 'Cancel' buttons, with 'Apply' highlighted by a red box and the number '5'.

(P4.6.3-1)

### 4.6.4 FTP Server Setting

Steps: (Ref. P4.6.4-1) “Setting – Advanced – FTP – Fill in the Server information – Test - Apply”

Tip1: For FTP Server information you may ask for your server provider.



The screenshot shows the 'FTP' configuration page in the IP CAMERA web interface. The left sidebar contains a menu with 'Settings' selected and 'Advanced' highlighted with a red box and the number '2'. The 'FTP' option is also highlighted with a red box and the number '3'. The main content area is titled 'FTP' and contains the following fields:

- Server Address: [Empty text box]
- Server Port: 21
- User name: [Empty text box]
- Password: [Empty text box]
- Passive mode: On
- Path: /
- Auto create dir: On

At the bottom of the form, there is a 'Test' button and a 'Please set first, and then test.' message. Below the form, there are 'Apply' and 'Cancel' buttons, with 'Apply' highlighted by a red box and the number '5'.

(P4.6.4-1)

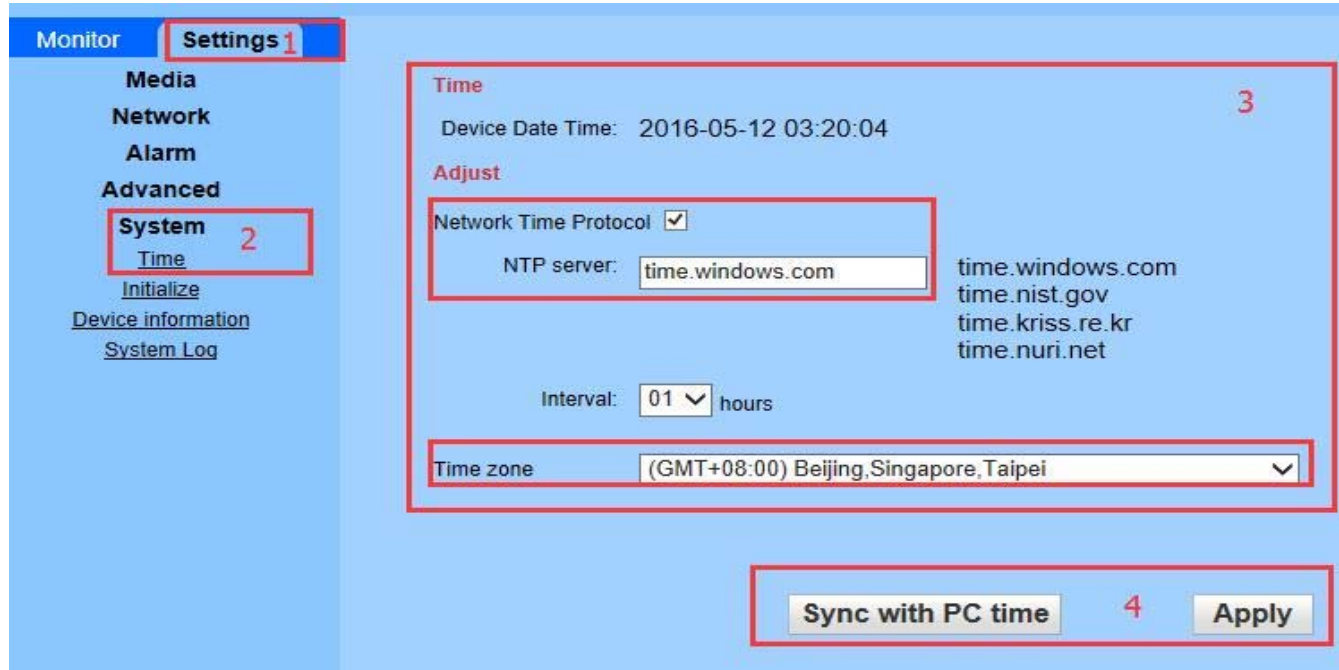
## 4.7 System Setting

### 4.7.1 Time Setting

Steps: (Ref P4.7.1-1) “Settings – System – Time – Choose the time zone and set the NTP - Apply”

Tip1: You can set the NTP

Tip2: You can Sync with PC time



(P4.7.1-1)

### 4.7.2 Browser SD Card content

Steps: (Ref P4.7.2-1) “Settings – System – Device Information – Browser SD Card”



#### Index of /sd/

<u>Name</u>	<u>Modified</u>	<u>Size</u>
<a href="#">Parent directory</a> -	-	-
<a href="#">20160511/</a>	11-May-2016 17:43	[DIRECTORY]
<a href="#">20160512/</a>	12-May-2016 09:28	[DIRECTORY]

192.168.1.10/web/admin.html

# IP CAMERA

Monitor **Settings**<sup>1</sup>

- Media
- Network
- Alarm
- Advanced
- System
- Time
- Initialize
- Device information**<sup>2</sup>
- System Log

### Device information

Device ID:	IPCAM
Device Type:	C6F0SgZ3N0P0L0
Network connection:	LAN
Current Client:	3
Software Version:	V6.1.1.2.1-20150909
Webware Version:	V1.0.1
Mac address:	00:E0:F8:22:11:8F
IP address:	192.168.1.10
Subnet mask:	255.255.255.0
Gateway:	192.168.1.1
Primary DNS:	192.168.1.1
Secondary DNS:	
UPnPstatus:	Failed
Manufacture's DDNS status:	Noenable
Third Party DDNS status:	Noenable
Start Time:	2016-05-12 08:21:29
SD status:	Card free space:29644MB total space:2 <b>Browser SD Card</b> <sup>3</sup> <a href="#">format SD Card as fat32</a> <a href="#">Unplug SD Card</a>

(P4.7.2-1)

## **4.8 Default Factory Settings and Ports:**

Using main Browsers (e.g.: IE browser)

Default Factory IP Address: 192.168.1.10

Default Factory User Name: admin

Default Factory Password: admin

RTSP Port: 554

ONVIF Port: 8080 (NVR Access protocol is ONVIF)

HTTP Port: 80