

HD Fast Dome IP Camera Series User Manual

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Summary

LILIN 20X/30X D/N 1080p IP PTZ cameras are capable of streaming HD video at up to 30 FPS. Featuring Wide Dynamic Range (WDR) feature, the 20X/30X IP PTZ cameras capture the highlights and shadows simultaneously, eliminating pixilation and smear. Combine this with 3D Noise Reduction technology and adaptive tone reproduction and the contrast of images in bright or dark areas is dramatically improved. Capable of making 360° continuous rotations, users can accurately position the cameras to identify specific targets. The 20X/30X optical zoom gives the 20X/30X IP PTZ cameras with an impressive range. With an IP66 weatherproof rating and a compact design, the 20X/30X IP PTZ cameras are ideal for numerous applications.

The built-in intelligent video analytics engine enables audio and motion detection for extra protection. Other useful features include two-way audio, SD card recording, smartphone live access, email snapshot, and continuously sending JPEG snapshots to an FTP server. These features are highly compatible with other applications. Even more, these IP cameras support cutting-edge technologies such as video de-interlacing, built-in video analytics, and ONVIF compliance.

Key Features

- Capability of recording at 30 FPS
- Supports various encoding formats (H.264 and MJPEG)
- Multiple Streaming technology, supporting 4 concurrent streams
- Supports Android, iPad, and iPhone live monitoring
- Audio and motion detection for notifications via email or FTP
- IVA alarm notifications via email or FTP
- Two-way audio (audio models only)
- Network time protocol (NTP) supported
- DDNS and UPnP supported
- Supports HTTP API
- Supports PCM/G.711 audio streaming
- Supports ONVIF protocol
- Supports LILIN Navigator

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Other References

Mobile devices

For mobile surveillance, refer to the detail page of LILINViewer on Apple App Store or Google Play.

LILIN Universal ActiveX Control

Sample codes and documents are included in the product CD and can be downloaded from our company website.

LILIN HTTP API

For non-ONVIF integration, see the LILIN HTTP API document. HTTP API is used in all LILIN IP cameras.

Caution

- Do not drop or damage the equipment
- Do not install the equipment near fire or heat sources
- Keep the equipment from rain, moisture, smoke, or dust
- Do not cover the opening of the cabinet with cloth and/or plastic or install the unit in poorly ventilated places. Allow 10cm between this unit and its surroundings
- Do not continue to operate the unit under abnormal conditions such as smoke, odor, or loss of signal whilst power is turned on
- Do not touch the power cord with wet hands
- Do not damage the power cord or leave it under pressure
- To avoid unnecessary magnetic interference, do not operate this unit near magnets, speaker systems, etc.
- All connection cables should be grounded properly

Disclaimer

To prevent possible unauthorized access to this device, please change the default admin password. Failure to do so may leave this device vulnerable, compromising your privacy. By using the camera, you accept responsibility for establishing and maintaining the security of this device on your network(s) and the wider internet. Please document the new password in a safe place. Forgetting the new password means you will no longer be able to access this network device and will need to perform a hardware reset to restore the default username and password.

Please be aware that this user manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable or available to all models. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.



Chapter 1 System Overview

Chapter 1-1 System Requirements

LILIN's IP PTZ camera uses compression technology that provides high compression rate and superior video quality. However, video performance depends highly on CPU power and network bandwidth for video streaming. The following sections specify the system requirements for using LILIN IP PTZ cameras.

Chapter 1-2 Software Requirements

Chapter 1-2-1 Apple Mac OS

LILIN IP PTZ camera uses HTML5 streaming which supports Safari browser for accessing video streaming of the IP camera on Apple Mac OS without any software plug-in.



Chapter 1-2-2 PC Windows OS

Merit LILIN Universal ActiveX software components for a web browser to display MJPEG or H.264 video. When you first log in to LILIN IP camera, you may see a prompt box as below via Windows OS.



Click **install** and follow the onscreen instructions to install necessary component.

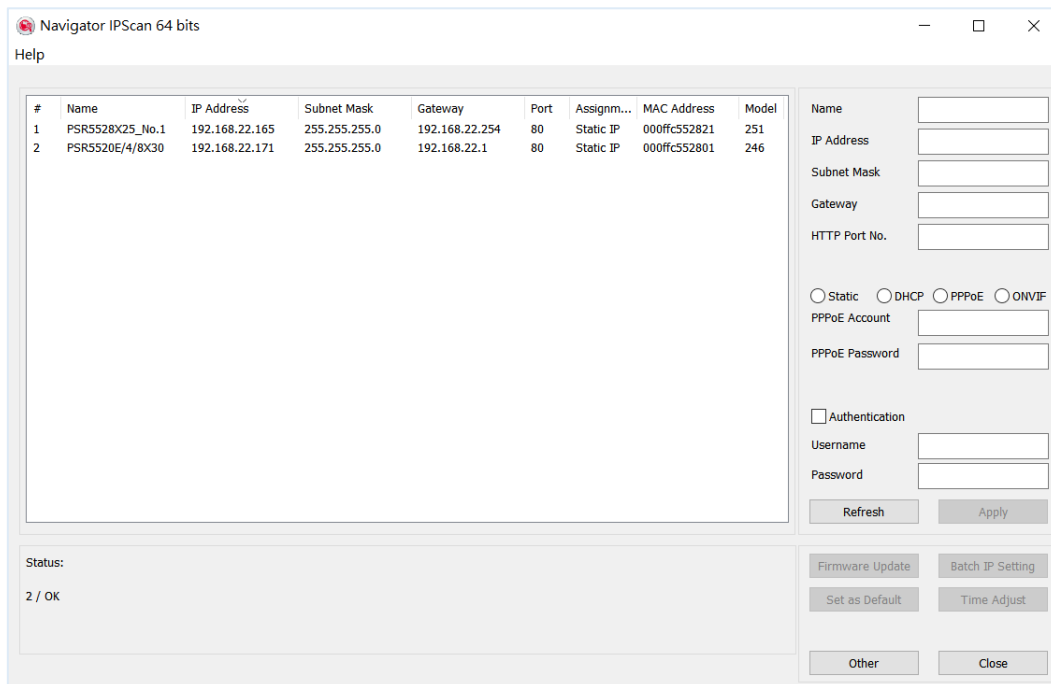
Chapter 2 Before Accessing IP Cameras

Before accessing the IP cameras, make sure that the camera's RJ-45 network connector, audio cable, and power cable are properly connected. To set the IP address, consult your network administrator. The default IP address for each IP camera is 192.168.0.200. Users can use the default IP address to verify the camera's network connection.

Chapter 2-1 Configure IP Addresses using the IPScan Utility

To configure the IP address of your cameras, download [IPScan](#) from our official website. Or, you can execute the IPScan installer from the installation CD directly. To change the IP address, subnet mask, gateway, or HTTP port of your cameras, follow the steps below:

- Run the IPScan utility
- Click **Refresh**. All available devices will be listed on the screen
- Select the device item from the device list
- To edit or modify IP address, subnet mask, gateway, or HTTP port, use the box
- Click **Apply** for the changes to take effect
- Click **Refresh** again to verify the changed settings



#	Name	IP Address	Subnet Mask	Gateway	Port	Assignm...	MAC Address	Model
1	PSR5528X25_No.1	192.168.22.165	255.255.255.0	192.168.22.254	80	Static IP	000fc552821	251
2	PSR5520E/4/8X30	192.168.22.171	255.255.255.0	192.168.22.1	80	Static IP	000fc552801	246

Configuration options on the right:

- Name:
- IP Address:
- Subnet Mask:
- Gateway:
- HTTP Port No.:
- Static ☐ DHCP ☐ PPPoE ☐ ONVIF ☐
- PPPoE Account:
- PPPoE Password:
- ☐ Authentication
 - Username:
 - Password:
- Buttons: Refresh, Apply, Firmware Update, Batch IP Setting, Set as Default, Time Adjust, Other, Close

Status: 2 / OK

Note: Make sure your IPScan is version 1.0.0.52 or above.

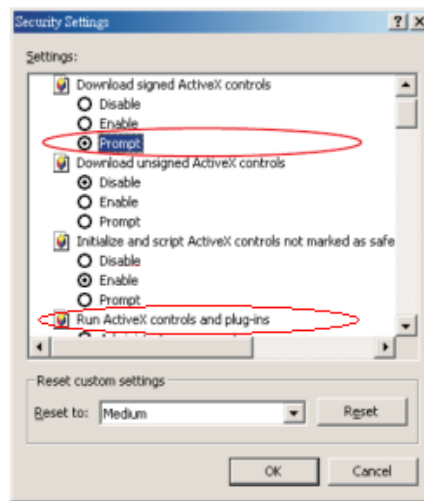
Chapter 2-2 Configure IP Addresses through HTML Connection

To change an IP address on a webpage, type the default IP address (192.168.0.200) into the browser address bar and follow the steps below:

- Log in to your LILIN IP camera.
- Click **Setup**→**Network** to edit or modify IP address, subnet mask, gateway, or HTTP port.
- Click **Submit** for the changes to take effect.

Chapter 2-3 Web Browser Settings & Software Components Required

Make sure your Internet browser allows signed ActiveX plug-in to run on your PC. Set Download Signed ActiveX plug-in controls to Prompt and enable Run ActiveX control and plug-in. You can set this in Internet Explorer→Tools→Internet Options→Security→Custom Settings.



Once completed, you can access the IP camera's live video by entering the default IP address via a web browser. A security warning dialog box will appear. Click OK to download the ActiveX directly from the IP camera.

Chapter 2-4 Login

The IP PTZ camera supports 3 levels of user access with different authorization level, including the system administrator (Administrator), operator (Operator) and guest (Viewer). The difference is administrator can monitor live images and perform operations and configure camera parameters, the operator can monitor the live image and operate the camera, while the guest can only monitor the live image. To log in to the IP PTZ camera, please enter the username and password in the login page, and then press **Confirm** button.

Information Security Version:

The administrator does not have a default username and password. To log in to the webpage, you need to create an administrator username and password. And should pass the username and password authentication to log in to the camera to monitor, operate and set up.

Non-security version:

The default administrator username is admin and password is pass



Chapter 3 IP Camera Operations

When logged in as an administrator, two main features are available: 1) camera operations and 2) configurations.

Chapter 3-1 HTML Operations



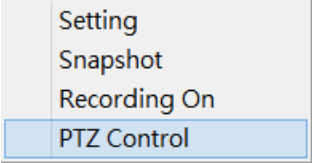
1. **Quick buttons**—IP camera shortcuts
2. **ActiveX display screen**—Display RTSP H.264 or MJPEG streaming video
3. **Profile switching menu**—Switching from one profile to another
4. **Setup buttons**—IP camera setup menu
5. **PTZ control panel**

Chapter 3-2 PTZ Control Panel

	Zoom In		Zoom Out	Zoom Speed 5	Zoom Speed
	Focus Far		Focus Near	Focus Speed 0	Focus Speed
	Auto Focus			Normal AF	Focus Mode
	Auto Pan Start		Auto Pan Stop	Scan5	Auto Pan Mode
	Flip 180			Goto Preset Point --	Go to preset position

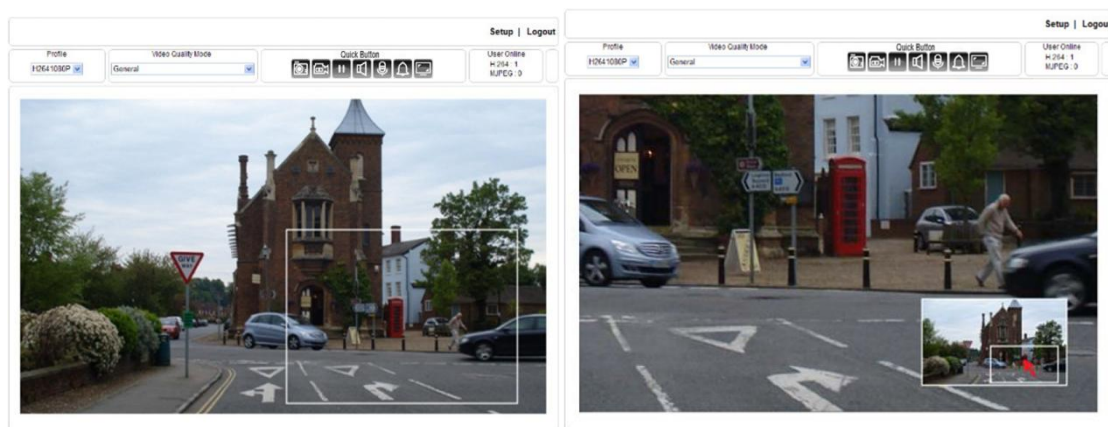
Chapter 3-2-1 Vertical and Horizontal Direction Controls

Two modes are available for moving the camera vertically and horizontally. The details are described below:

	3-2-1-1 Directional buttons control Pan-Tilt As shown in the image to the left, eight arrow buttons and speed options are provided to move around the camera. Select the moving speed from the drop-down menu, and press any arrow to move the fast dome network camera. The greater the Speed number is, the quicker the camera will move.
	3-2-1-2 Mouse control PTZ As shown in the image to the left, a pop-up menu will appear when you right-click on the screen. Choose PTZ Control to enter the mouse control mode. Click and hold the mouse and move around the screen to control the camera according to your mouse movement. The moving speed depends on the distance between the center of the screen to the cursor: When the distance is short, the camera moves slowly; when the distance is long, the camera moves rapidly.

Chapter 3-2-2 ePTZ

The ActiveX control provides an ePTZ (electronic Pan, Tilt, and Zoom) feature. To perform an ePTZ operation, hold and drag your mouse across the screen.



Move your cursor to the PIP window and drag inside it to perform ePan and eTilt actions. The scroll wheel can be used to zoom in and zoom out.

Chapter 3-2-3 Control Panel

The quick control panel buttons are described below:

	Snapshot: Take a snapshot of the video.
	Recording to the PC.
	Pause recording to the PC.
	Audio on: Turn audio on (audio models only).
	Speak on: Turn on to speak to the remote site (audio models only).

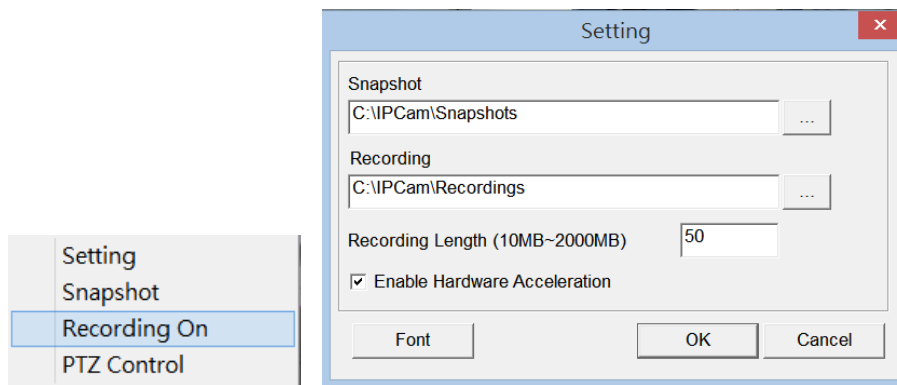
	Alarm output control (Alarm models only)
	Switch screen

Chapter 3-2-3-1 Two-way Audio (for audio model only)

	To activate two-way audio, please click the microphone icon to speak to the remote site.
	To stop speaking to the remote site, please click the microphone icon again.
	To listen to the remote site, please click the speaker icon.
	To stop listening to the remote site, please click the speaker icon again.

Chapter 3-2-3-2 Record in a Local PC

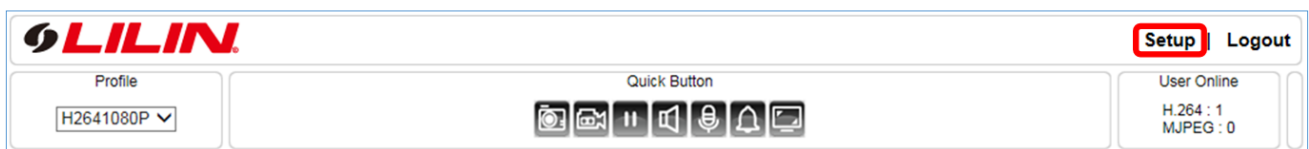
To record videos to a local PC, first right-click on the Universal ActiveX control. Choose **Setting** to specify the recording paths and recording sizes, and choose **Recording On** to start recording. Please make sure that the ePTZ or ROI feature is disabled before trying to open the setting menu.



Note: ActiveX is for Windows OS only.

Chapter 4 Basic Settings

As an administrator, you can configure the IP camera via a standard HTML webpage. Click Setup at the top-right corner of the screen after you log in to the camera.



Chapter 4-1 System





Chapter 4-1-1 General

Under System Settings→General, you will see server system information, such as MAC address, firmware version, user settings, and system time settings. To modify these options, follow the instructions below:

Basic >> System >> General	
MAC Address	00:0f:fc:22:41:24
Firmware Version	2.10.36.672
Firmware Build Date	Mar 11 2020 14:50:12
Pan-Tilt Firmware Version	2.1.14
Camera Firmware Version	2.13
OS Version	Linux 2.6.38.8 (Fri Sep 1 15:59:00 CST 2017)
System Reboot Time	2012/01/01 08:01:02
Device Name	IPS430A
Language	English
Display Device Name	☒ Enable ☐ Disable
Display Time Status	☒ Enable ☐ Disable
Display PTZ OSD	☒ Enable ☐ Disable
Display AutoPan OSD	☐ Enable ☒ Disable
ActiveX OSD Display	☐ Enable ☒ Disable
ActiveX OSD Name	IPS430A
Web Title Name	Merit LILIN H.264 IPS430A
Low Latency Mode	☐ Enable ☒ Disable
Submit	

- **MAC Address:** Network MAC address of the IP PTZ camera.
- **Firmware Version:** You are allowed to upgrade IP PTZ camera's firmware remotely.
- **Firmware Build Date:** Firmware version build date and time.
- **Pan-Tilt Firmware/CCD Firmware Version:** Check if the firmware is up-to-date.
- **OS version:** Check if the device is up-to-date.
- **System Reboot Time:** The last time your system was rebooted
- **Device Name:** The device name can be found using the IPscan utility, which allows you to identify IP cameras. To change the device name, enter a new name for the IP camera and click Submit.
- **Language:** Users can choose the applicable language.
- **Display Device Name:** Enable/disable to display/hide IP PTZ camera device name.
- **Display Time Status:** Enable/disable to display/hide camera time on the OSD.
- **Display PTZ OSD:** Enable/disable to display/hide IP PTZ currently angle information on the OSD.
- **Display Auto Pan OSD:** Enable/disable to display/hide IP PTZ Auto-Pan or Self-Run running or not on the OSD.
- **ActiveX OSD Display:** Enable/disable to display/hide the ActiveX OSD Name.
- **ActiveX OSD Name:** The name you enter here will be displayed on the ActiveX screen.
- **Web Title Name:** Enter the name to be displayed on the web browser.
- **ActiveX Low Latency Mode:** Enable to reduce latency of the ActiveX.

Note: ActiveX is for Windows OS only.

Chapter 4-1-2 User

The camera supports up to 10 user accounts. Each account can be individually configured for its access rights. To add/edit a user, click Add/Edit User. To access an IP camera without authentication, switch the Bypass Logon option to On. Enable IPScan Bypass Logon to log in the camera through IPScan without authentication.

Basic >> System >> User

Bypass Logon ☐ On ☒ Off
 IPScan Bypass Logon ☒ On ☐ Off

User

To add a user, press **Add User**, and you will see the following screen:

Account

New Password

Password have to meet the following criteria:
 (1)More than or equal to 8 characters,
 (2)Allow uppercase letter, lowercase letter, number digit, and special character,
 (3)Must have at least three types of character sets.

Confirm Password

User Group ☒ Administrator, ☐ Operator, ☐ Viewer

Administrator ☒
 Panel Control ☒
 PTZ Control ☒
 Streaming 1 (H2641080P) ☒
 Streaming 2 (JPEG480P) ☒
 Streaming 3 (H264480P) ☒
 Streaming 4 (JPEGCIF) ☒

Enter the account name and password for the new account, and then check to assign the access rights for this account.

To edit account information, click **Edit User**. To delete a user, click **Remove User**. Click **Submit** to update the settings.

Chapter 4-1-3 Timer Settings

You can change the time of your camera through a HTML web page. Simply select the date and time in the drop-down menus, and click **Submit** to apply. You may also set the daylight saving time in this page.

Basic >> System >> Timer

Server Time Tue, 25 Feb 2020 14:57:23 GMT+0800

Synchronize with NTP ☒ Every Hour ☐ Off

Time Server

Time Zone

Time

Daylight Saving Time ☐ On ☒ Off

Start Date (Month/Date/Hour)

End Date (Month/Date/Hour)

Enable Holiday List ☐

Synchronize with an NTP server

To synchronize with an NTP server, change the Synchronize with NTP to Every Hour. The camera will synchronize its system time with a time server every hour.

Note: This function requires Internet connection.

Chapter 4-2 Video / Audio



Chapter 4-2-1 General

To transmit video over a low bandwidth network such as the Internet, set the bit rate close to the actual upload bandwidth. The camera encodes frames based on the bit rate setting.

Basic >> Video / Audio >> General

Profile :

TV System : ☒ NTSC ☐ PAL Output :

Fix Bitrate Mode : ☐ Enable ☒ Disable

H.264 :1920 x 1080

Profile Name : H2641080P

Output Frame Rate :

GOP (Group of Pictures) :

VBR/CBR Mode :

Bit Rate :

Alarm Weighted Mode : ☐ Enable ☒ Disable

RTSPURL : rtsp://192.168.123.231/rtspH2641080p

JPEG :720 x 480

Profile Name : JPEG480P

Output Frame Rate :

Image Quality :

Alarm Weighted Mode : ☐ Enable ☒ Disable

RTSPURL : rtsp://192.168.123.231/rtspjpeg480p

H.264 :720 x 480

Profile Name : H264480P

Output Frame Rate :

GOP (Group of Pictures) :

VBR/CBR Mode :

Bit Rate :

Alarm Weighted Mode : ☐ Enable ☒ Disable

RTSPURL : rtsp://192.168.123.231/rtspH264480p

JPEG :352 x 240

Profile Name : JPEGCIF

Output Frame Rate :

Image Quality :

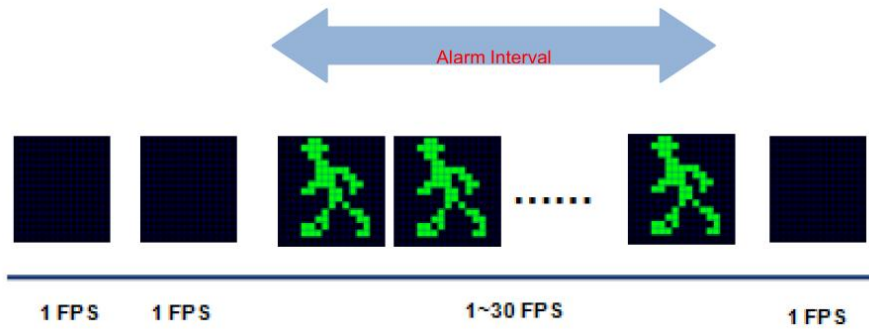
Alarm Weighted Mode : ☐ Enable ☒ Disable

RTSPURL : rtsp://192.168.123.231/rtspjpegcif

Submit

Load Default

- **Profiles:** 4 customizable profiles.
- **TV System:** NTSC/PAL video systems.
- **Fix Bitrate Mode:**
- **Profile Name:** Description of the streaming profile.
- **Output Frame Rate:** The frame rate of the video.
- **GOP:** The number of I-frames to be displayed in one second.
- **VBR/CBR Mode:** Variable bit rate, an encoding mode that reduces the use of bandwidth; CBR: constant bit rate, an encoding mode that consumes more bandwidth.
- **Bit Rate:** The maximum bit rate available for your network connection.
- **Image Quality:** The compression rate of the MJPEG stream.
- **Alarm Weighted Mode:** Enable to prioritize as the output stream you want to see when an alarm is detected.
- **RTSP URL:** Allows you to see the video stream through the Real Time Streaming Protocol.



Chapter 4-2-2 Video Quality Tuner

Chapter 4-2-2-1 Day Night Mode

IR Cut removable controls IR activation, and can be set to (1) auto, (2) day, (3) night.

Day Night Mode	Quality Tuner	Exposure Controller
☒ Auto Day/Night Switch Level 2 ▾		
☐ Day Mode ☐ Night Mode		
IR Curve Normal Light ▾		

- **Auto:** Automatically switches between **Day Mode (colored)** or **Night Mode (black and white)** based on sensor signals.
- **Day/Night Switch Level:** Set the level of sensitivity for the **Auto Mode**.
- **Day Mode:** IR cut feature is forced to be always on.
- **Night Mode:** IR cut feature is removed.
- **IR Curve:** Select night mode ambient light source wavelength.

Chapter 4-2-2-2 Quality Tuner

Day Night Mode	Quality Tuner	Exposure Controller
Mirror	Off ▾	
Flip	Off ▾	
WDR	Off ▾	
DNR	3 ▾	
Sharpness	8 ▾	
Brightness	128 ▾	
White Balance Mode	ATW Indoor ▾	
Manual Red	37 ▾	
Manual Blue	37 ▾	
Defog Level	Off ▾	
Electronic Image Stabilization	Off ▾	
Load Default		

Video setting options are described as followed:

- **Mirror:** Flip the video horizontally.
- **Flip:** Flip the video vertically.
- **WDR:** Enables or disables Wide Dynamic Range to capture greater details. When turned on (the system will be restarted), the camera will record up to 2MP @ 30 fps in H.264. The default is off (the system will be restarted, H.264: up to 2MP @ 60 fps).
- **DNR:** With the 3D noise reduction function, the processor analyzes pixel by pixel and frame by frame to eliminate environmental noise signal so that the highest quality image can be produced even in low light or slow speed shutter conditions. Options cover **Off** and **1–5**, with a default value of **3**.
- **Sharpness:** Intensifies the contour of subjects. The settings are **0–15**, with a default of **8**.
- **Brightness:** This parameter adjusts the brightness of the image. The settings are **1–255**, with a default of **128**.
- **White Balance Mode:**
Our camera offers two white balance modes: **AWB** (Auto White Balance), which can automatically control the white balance, and **MWB** (Manual White Balance), with which you have to manually control the white balance. **AWB** also provides the **ATW** (Auto Trace White Balance) mode and the **Full Open** mode. The MWB includes specific color temperature settings and a user mode.
 - **ATW Indoor:** Auto Trace White Balance, Color temperature 2800–9500 K
 - **ATW Outdoor:** Auto Trace White Balance, Color temperature 2200–10500 K
 - **Full Open:** Auto Trace White Balance, Color temperature 1500–10500 K
 - **Manual:** Manual White Balance
- **Defog:** When the surrounding area of the subject is foggy and shows low contrast, the defog mode will make the subject appear clearer.
- **Electronic Image Stabilization:** Switching **ON** to reduce image blur caused by, for example, vibration. This function allows you to obtain images without much blurring. A vibration frequency of around 10 Hz can be most effectively reduced. The Image Stabilizer function employs the digital zoom system, so the angle of view and resolution are changed, but the sensitivity is maintained.

Chapter 4-2-2-3 Exposure Controller

Day Night Mode	Quality Tuner	Exposure Controller
Auto Gain Control(SENSE UP+)	30dB ▼	
Exposure Controller	Full Auto ▼	
Full Auto		
Auto Slow Shutter	On ▼	
Back-light Compensation	Off ▼	
Shutter Priority		
Shutter Speed	1/60 ▼	
Iris Priority		
Iris Position	F1.6 ▼	
Manual Mode		
Fix Shutter Speed	1/60 ▼	
Fix Iris Position	F1.6 ▼	
Load Default		

The exposure settings include automatic exposure mode and manual exposure mode. AE modes: automatic brightness control through exposure level sensing object. This camera features adjustable maximum gain control, full auto, shutter priority, and iris priority. Manual Exposure Mode: Manual adjustment of shutter speed and iris position.

- **Auto Gain Control (AGC):** AGC Settings (Off, 2dB, 4dB, 6dB, 8dB, 10dB, 12dB, 14dB, 16dB, 18dB, and 20dB, with a default of 18dB).

- **Auto exposure mode Full Auto:** In this mode, the exposure is automatically controlled by metering the brightness of subjects.
 - **Auto Slow Shutter:** Auto slow shutter: Activate the auto slow shutter photography mode. When the ambient brightness becomes darker to the threshold of the slow shutter activation, the camera system will automatically adjust the slow shutter speed according to the image brightness to enhance the shooting effect.
 - **Back Light Compensation (BLC):** When the subject is too dark to be visible, this function will adjust the exposure value, enhance the brightness of the scene, and make the subject clearer.
- **Auto exposure mode Shutter Priority:** After you select the shutter speed, the iris value will be determined automatically by the camera. Faster shutter speed allows the camera to capture instantaneous streak-free image of a moving subject, while slow speed improves light sensitivity in poorly illuminated areas.
 - **Shutter Speed:** 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, and 1/10000, with a default of 1/60.
- **Auto exposure mode Iris Priority:** After you select the aperture value, the shutter speed will be determined automatically by the camera.
 - **Iris Position:** F1.6, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11, F14, and Off, with a default of F1.6.
- **Manual Mode:** Manually determines shutter speed and iris position.
 - **Fix Shutter Speed:** 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, and 1/10000, with a default of 1/60.
 - **Fix Iris Position:** 1.6, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11, F14, and Off, with a default of F1.6.

Chapter 4-3 Network



Note: Setting options may differ depending on the model you use.

Chapter 4-3-1 General

Network settings are the basic settings that connect LILIN IP cameras to the network. The default IP address of our IP cameras is 192.168.0.200. Enter this IP address into your web browser to verify the network connection between a local PC and your IP camera.

To set up a local area network, enter the IP address, subnet mask, gateway, and DNS. Also enter account name and password if you are using PPPoE to connect to the network. Click Submit to update the settings.

Basic >> Network >> General

Network	☒ Static ☐ DHCP ☐ PPPoE
IP Address	192.168.123.231
Subnet Mask	255.255.255.0
Gateway	192.168.0.1
Default DNS	168.95.1.1
Second DNS	168.95.1.1
Account	account@pppoe.com
Password	
2nd IP Address	☐ Enable ☒ Disable
2nd IP Address	192.168.0.200
2nd Subnet Mask	255.255.255.0
3rd IP Address	☐ Enable ☒ Disable
3rd IP Address	192.168.0.200
3rd Subnet Mask	255.255.255.0

Submit



To acquire Internet access, contact your local Internet Service Provider (ISP) for a global IP address. Enter the IP address (global), subnet mask, and gateway IP provided by your ISP.

- **Default DNS**—The IP address of the default and first DNS server
- **Second DNS IP Address**—The IP address of the backup and second DNS server to the default DNS
- **PPPoE Account**—Username of the PPPoE service
- **PPPoE Password**—Password of the PPPoE service

A router, gateway, or other DHCP software server can remotely assign an IP address to your IP camera. There is no need to manually configure the IP address, subnet mask, and gateway. However, every time the DHCP service is rebooted, the IP address of the IP camera may vary. You may need to use IPscan to search for the IP camera. To enable DHCP, click the DHCP option and click Submit.

Note: Once the DHCP option is enabled, the IP camera is assigned an IP address by the DHCP server. This feature is only permitted in LAN environments.

Chapter 4-3-2 IPv6

Basic >> Network >> General IPv6

Network ☐ On ☒ Off

IP Address /

Default Router

Default DNS

Enter IPv6 IP address, default router, and default DNS for IPv6 service.

Chapter 4-3-3 HTTP/RTSP Service

HTTP and RTSP are two reliable protocols for video streaming. With correct port forwarding, videos can be sent over the Internet. Details are described in the appendix. To change the HTTP port number, consult your network administrator. Choose the streaming type you want to use (HTTP or RTSP/UDP). Click Submit for the changes to take effect.

Basic >> Network >> HTTP/RTSP Service

HTTP Port

RTSP Port

ONVIF

ONVIF search ☒ On ☐ Off

RTSP Package Size KB

METADATA ☐ On ☒ Off

RTCP Check ☒ On ☐ Off

Repeated delivery of SPS/PPS ☒ On ☐ Off

RTSP Authentication ☒ On ☐ Off

Video Port ☒ HTTP Port ☐ RTSP/UDP Port

Profile Name H264 1920x1080

Profile Name JPEG 720x480

Profile Name H264 720x480

Profile Name JPEG 352x240

Settings on this page are described below:

- **ONVIF**: Choose a ONVIF protocol from the drop-down list.
- **ONVIF search**: Enable/disable ONVIF search function.
- **RTSP Package Size**: Choose the size of each RTSP package depending on your bandwidth.
- **METADATA**: Enable/disable METADATA.
- **RTCP Check**: Enable to send RTCP packages for transmission optimization.
- **Repeated Delivery of SPS/PPS**: Enable to send SPS/PPS information before I frames.
- **RTSP Authentication**: Enabling this option will require username and password when connecting to the RTSP stream.
- **Video Port**: Choose between HTTP or RTSP/UDP for your stream.
- **Profile Name**: Change the stream name.

Chapter 4-3-4 DDNS

The DDNS service allows you to automatically update the DNS server. LILIN provides three DDNS servers to choose from (we recommend you use the first one from the drop-down menu). Click Submit for the changes to take effect.

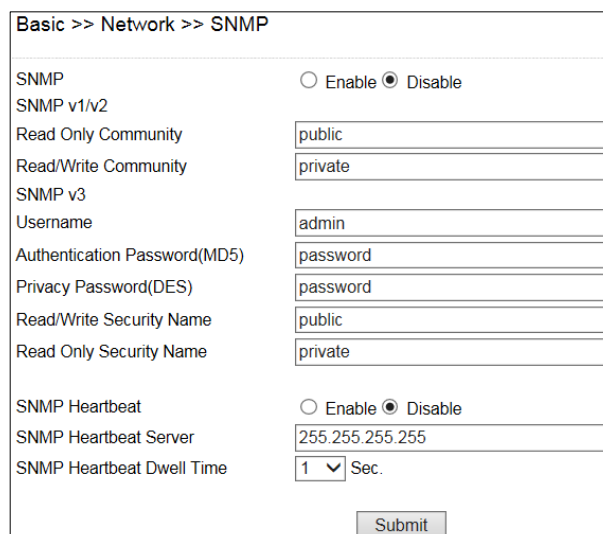


To activate DDNS, go to www.ddnsipcam.com. If the IP camera is on Internet with a global IP address, use the last 6 digits of the MAC address as the host name with default account and the default password,. The IP camera will automatically register to www.ddnsipcam.com.

Note: The DDNS feature requires Internet connection.

Chapter 4-3-5 SNMP

Enable to activate SNMP service. Modify the fields to fit your requirements, and click **Submit** for the changes to take effect.



Chapter 4-4 Maintenance



In the **Maintenance** page, you can click **Load Default** to restore the camera to factory settings, or click **Reboot System** to restart the camera.

To update the firmware of your IP camera, click **Browse** and locate the update file. Click **Submit** to start the firmware update.

Basic >> Maintenance >> Firmware Update

Please do not turn off power and wait until this web page shows up automatically. Fail to update firmware correctly due to network communication issue that it may damage this machine and is required to ship back to your vender for repair.

File System(flasham33pl.bin/flashaml33pl.bin)
flasham33pl.bin:Application Firmware
flashaml33pl.bin:Linux OS

瀏覽... Submit

Upload 0%

Export Settings Export

Import Setting 瀏覽... Upgrade

Reboot System Reboot System

Default Settings

☒ Initialize without Network Settings
☐ Initialize All Settings

Load Default

Warning: Never disconnect the power during the update. This could cause irreversible damage to your device.

Note: If you forget your password, please contact your vendor or send the device to us.

Chapter 4-5 PTZ

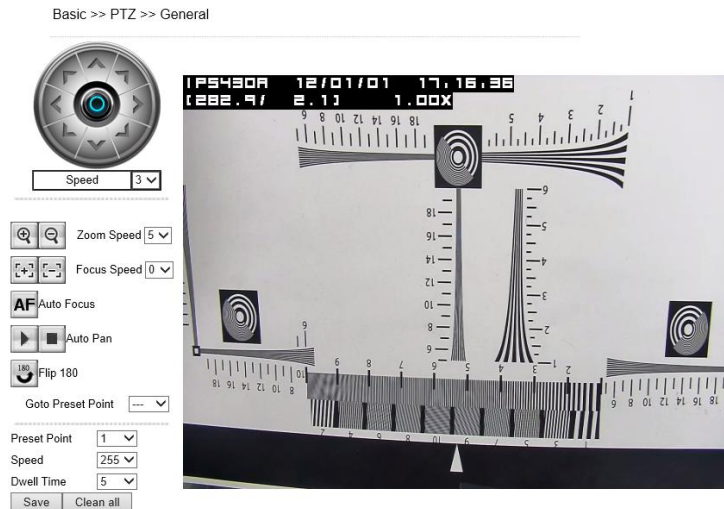


Chapter 4-5-1 General

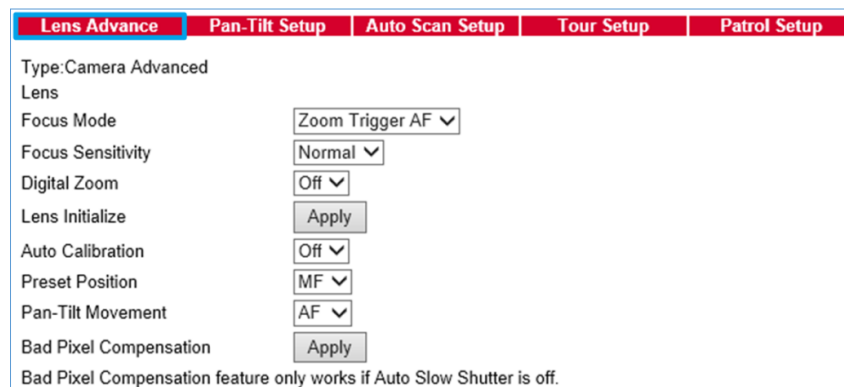
A total of 128 preset positions can be programmed for the IP PTZ camera. Please refer to the instructions below to configure preset positions. To set up a preset point, first move the cursor to the PTZ control panel. Then move to the desired position by using the pan, tilt and zoom buttons. Next, assign a number for the current position from the drop-down Preset Point list. Then assign a Dwell Time and Speed for the current position from the drop-down menus. Click Save for the changes to take effect.

- **Preset Point:** Select the preset point number (1-128).
- **Speed:** Select speed data (0-255 deg / sec).

- **Dwell Time:** Select the dwell time data (0-255 sec).
- Press the “**Save**” button to let the system memorize and save the set data.
- Press the “**Clear All**” button to make the system clear the set data.



Chapter 4-5-2 Lens Advance Setting



- **Focus Mode:** The camera is equipped with three auto focus modes, Normal AF / Interval AF / Zoom Trigger AF. The user can select the appropriate mode to adjust the focus according to the scene environment and display excellent scene performance.
 - **Normal AF mode:** The camera determines the degree of image blur according to the change in scene environment, and starts to auto focus.
 - **Interval AF mode:** The camera determines the degree of image blur according to the change in scene environment after the interval time, and starts to auto focus.
 - **Zoom Trigger AF mode:** The camera will start to auto focus after the optical zoom action. After the auto focus is completed, it will be set to the current focus. The auto focus program will not be reactivated until the optical zoom action is performed again.
- **Focus Sensitivity:** Set the auto focus sensitivity.
- **Digital Zoom:** Enable digital zoom after the optical zoom range is exhausted.
- **Lens Initialize:** Click **Apply** to restore the zoom and focus to factory defaults.
- **Auto Calibration:** Turn on this option to automatically perform AF at 00:00 every night.
- **Preset Position:** Set the camera to **Auto-Focus (AF)** or **Manual-Focus (MF)** when the camera performs the preset operation.
- **Pan-Tilt Movement:** Set the camera to **Auto-Focus (AF)** or **Manual-Focus (MF)** when the camera performs Pan-Tilt function.
- **Bad Pixel Compensation:** Defective pixels can occur during storage or the manufacturing process. Enabling this option allows the system to replace defective pixels with their neighboring pixels.

Chapter 4-5-3 Pan-Tilt Setup

Lens Advance	Pan-Tilt Setup	Auto Scan Setup	Tour Setup	Patrol Setup
Type: Pan-Tilt Setup				
Home Position	Off ▼	Preset 1 ▼	Apply	
Self Return Time	Off ▼	Min 0 ▼ Sec. 0 ▼	Apply	
Self Return Mode	Off ▼	Home ▼	Apply	
Auto Mode	On ▼	SEQ ▼	Apply	
Motor Power Saving	On ▼			
Self Diagnosis	On Off			

- **Home Position:** Specify a home position for one of the presets.
- **Self Return Time:** If the IP PTZ camera idles after the chosen time period, the selected function will be activated automatically.
- **Self Return Mode:** Return to home position in modes such as home position, auto scan mode, tour mode, or patrol mode. Users are able to set an operation mode to ensure all-day monitoring. In the Return Mode, if the IP Fast Dome Camera idles for a period of time, the selected function will be activated automatically. The Return Mode allows constant and accurate monitoring to avoid the Dome Camera from idling or missing events.
- **Auto Mode:** Turn on "Auto Mode" to activate automatic scanning (4 paths), preset point position sequence cycle, tour table (4 tables) or memory cruise mode (4 paths).
- **Motor Power Saving:** Turn on the motor power saving mode and the control system will enter the power saving mode when pan and tilt motors stop running. This will reduce the motor torque to 70%. When the pan or tilt motor is running, the motor torque will return to 100%.

Note: This feature depends on the model or firmware version.

Chapter 4-5-4 Auto Scan Setup

The IP PTZ Camera supports up to sixteen auto scan paths. Please follow the instructions below for auto scan path setup.

Lens Advance	Pan-Tilt Setup	Auto Scan Setup	Tour Setup	Patrol Setup
Type: Auto Scan Setup				
Auto Scan Path	1 ▼			
Dwell Time	5 ▼ Sec.			
Speed	5 ▼			
Start Position	Apply			
End Position	Apply			

- **Auto Scan Path:** Select a scan path (1 – 4) from the drop-down list.
- **Dwell Time:** Set the time you want the camera view to stay at the start position or end position.
- **Speed:** Set the scanning speed between two positions.
- **Start Position:** Set the start position of the selected scan path.
- **End Position:** Set the end position of the selected scan path.

To set up an auto scan path, please first select a path number from the drop-down list. Then move the cursor to the PTZ control pane, and move the camera to a desired view (PTZ controls) as the start point of an auto scan path. Click **Apply** next to **Start Position** and move around the camera view at will to program the auto scan path via PTZ controls. When you finish programming, click **Apply** next to **End Position** to end the programming process. Next, assign a **Dwell Time** and **Speed** for the current path from the respective drop-down list.

Chapter 4-5-5 Tour Setup

The IP Fast Dome Camera supports up to four tour paths; each path can include up to 32 preset positions. Please refer to the instructions below to program a Tour table.

Note: Before setting this function, users must pre-define at least two preset points.

Lens Advance	Pan-Tilt Setup	Auto Scan Setup	Tour Setup	Patrol Setup			
Type: Tour Setup							
Tour Path 1 Apply							
1	-	9	-	17	-	25	-
2	-	10	-	18	-	26	-
3	-	11	-	19	-	27	-
4	-	12	-	20	-	28	-
5	-	13	-	21	-	29	-
6	-	14	-	22	-	30	-
7	-	15	-	23	-	31	-
8	-	16	-	24	-	32	-

- **Tour Path:** Choose a tour path to set up.
- **Speed:** Set the running speed from the preset point position to the preset point position.
- **Dwell Time:** Set the dwell time at the preset point position.
- **Sequential Preset Points Setting:** Set up preset point positions for the selected tour path in any order you want from the drop-down list. Finally, click **Apply** to save the settings.

Chapter 4-5-6 Patrol Setup

Lens Advance	Pan-Tilt Setup	Auto Scan Setup	Tour Setup	Patrol Setup
Type: Patrol Setup				
Patrol Path 1 Start End Clean				

The IP Fast Dome Series supports up to sixteen patrol paths. Please follow the instructions below for patrol path setup.

To set up a patrol path, select a path number from the drop-down list. Then move the cursor to the PTZ control pane, and move the camera to a desired view (PTZ controls) as the start point of the patrol path. Click **Start** and move around the camera view at will to program the patrol path via PTZ controls. When you finish programming, click **End** to end the programming process.

Chapter 4-5-7 Home Position Settings

To set up the Home Position:

1. In Pan-Tilt Setup, turn "On" the Home Position and select the preset point number as the Home position.
2. In the general PTZ settings, move the PTZ screen to the desired scene, select the preset point number corresponding to the Home Position, and save it as the preset point.
3. Click on Home button and the PTZ will return to the Home position.

Type: Pan-Tilt Setup
Home Position On ! Preset 1 Apply

Preset Point 1
Speed 2 255
Dwell Time 5
Save Clean all

Chapter 4-5-8 PTZ Schedule Settings

To set up PTZ scheduling, please select PTZ schedule. Select the desired schedule type (**Not Scheduled**, **Scan**, **SEQ**, **Tour**, **Patrol**, and **Preset**). Click the schedule to highlight the time intervals you want the camera to perform the pre-determined schedule. Click **Apply** to save the settings and **Clean All** to clear the settings.

Schedule

	0:00	6:00	12:00	18:00
Mon				
Tue				
Wed	1	S	1	1
Thu				
Fri				
Sat				
Sun				

☐ Not Scheduled
☐ Scan1
☐ Scan2
☐ Scan3
☐ Scan4
☐ SEQ
☐ Tour1
☐ Tour2
☐ Tour3
☐ Tour4
☐ Patrol1
☐ Patrol2
☐ Patrol3
☐ Patrol4
☐ Preset 1
☒ Stop

Apply Clean All

Chapter 5 Advanced Mode

The Advanced Mode provides several professional settings that are not available in the Basic Mode.

Chapter 5-1 System

System
Video / Audio
Network
Event
Notification
Maintenance
PTZ

Chapter 5-1-1 System Log

You can view the system-generated log in this page. Click Save to export the log to a text file.

Advance >> System >> System Log

Log Page 1

1.	192.168.3.137	admin	2015/12/08 08:48:47	PTZ CAMERA SETTING
2.	192.168.3.137	admin	2015/12/08 08:48:45	PTZ CAMERA SETTING
3.	192.168.3.137	admin	2015/12/08 08:35:01	USER LOGIN
4.	192.168.3.145	admin	2015/12/08 07:23:10	USER LOGIN
5.	192.168.3.145	admin	2015/12/08 07:23:08	USER LOGIN
6.			2015/12/08 07:22:37	SPD POWER ON
7.	192.168.3.137	admin	2015/12/07 17:30:19	STREAM LOGOUT
8.	192.168.3.137	admin	2015/12/07 17:30:11	STREAM LOGOUT
9.	192.168.3.132	admin	2015/12/07 12:04:21	STREAM LOGOUT
10.	192.168.3.132	admin	2015/12/07 12:04:16	USER LOGIN
11.	192.168.3.161	admin	2015/12/07 11:19:45	STREAM LOGOUT

Save

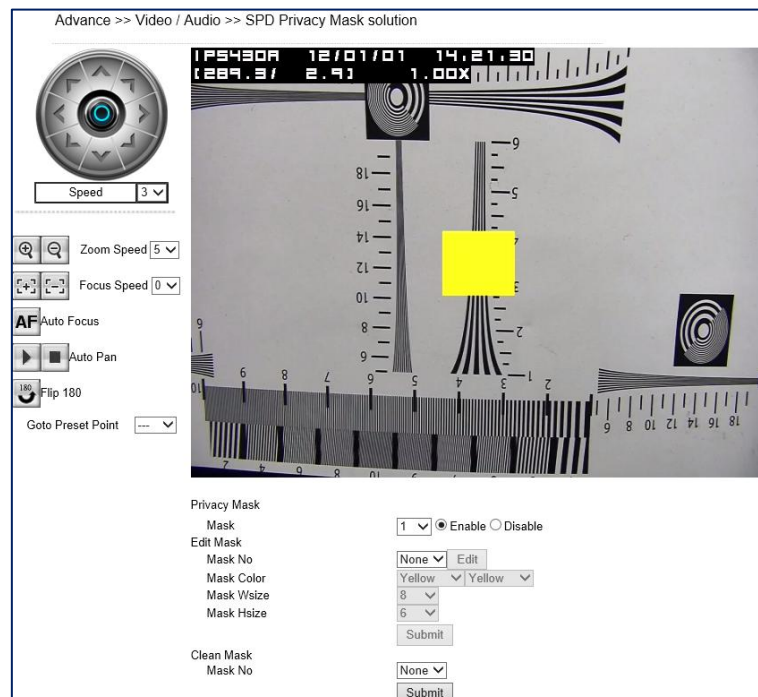
Chapter 5-2 Video/Audio Settings



Note: Setting options may differ depending on the model you use.

Chapter 5-2-1 Privacy Masking

Our PTZ IP camera provides up to 16 privacy masks. Choose a mask number and click **Edit** for a mask to appear in the center of the screen. You can also adjust the color, width, and length of the mask and move the camera to the appropriate position to hide any object. Press **Submit** to save the changes. You are allowed to create up to 16 masks for one camera. To remove a mask, select a number from the **Mask No.** drop-down menu under **Clean Mask** and click **Submit** to save the changes.



Chapter 5-2-2 Audio Adjust

Audio settings are described below in details:

- **Audio Adjust:** Enable/disable audio adjustment
- **Audio Input Volume:** MIC or line-in volume.
- **Audio Input Gain:** level of gain for audio input
- **Audio Output Volume:** Volume adjustment.
- **Audio Coding Type:** G.711 u-Law
- **Sampling rate:** set the audio sampling rate
- **Bit Rate:** 16 Kbit/s

Advance >> Video / Audio >> Audio Adjust

Audio Adjust	☒ Enable ☐ Disable
Audio Input Volume	50
Audio Input Gain	0 dB
Audio Output Volume	50
Audio Coding Type	G711 u-law
Sampling Rate	8000 Hz
Bit Rate	16 kbit/s

Submit

Note: Audio model only

Chapter 5-3 Network

System	Video / Audio	Network	Event	Notification	Maintenance	PTZ
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Chapter 5-3-1 Multicast

LILIN IP PTZ camera supports video streaming of 4 different content formats. Under this page, you can configure the settings for individual streams.

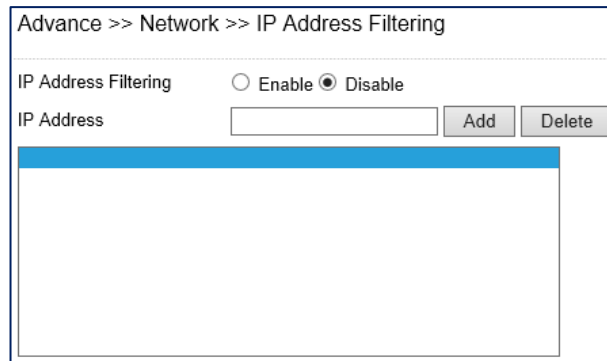
Advance >> Network >> Multicast

H2641080P	IP Address	239.0.0.0
	Video Port	1234
	Video Port RTCP	1235
	Audio Port	1236
	Audio Port RTCP	1237
	TTL	5
JPEG480P	IP Address	239.0.0.0
	Video Port	1234
	Video Port RTCP	1235
	Audio Port	1236
	Audio Port RTCP	1237
	TTL	5
H264480P	IP Address	239.0.0.2
	Video Port	5568
	Video Port RTCP	5569
	Audio Port	5570
	Audio Port RTCP	5571
	TTL	5
JPEGCIF	IP Address	239.0.0.3
	Video Port	5572
	Video Port RTCP	5573
	Audio Port	5574
	Audio Port RTCP	5575
	TTL	5

Submit

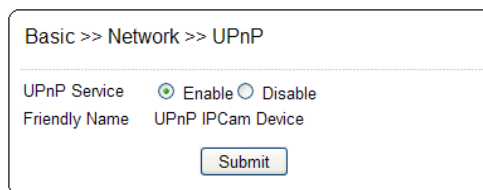
Chapter 5-3-2 IP Address Filtering

LILIN IP PTZ camera provides an IP address filter to help you block unauthorized IP addresses from accessing the camera. Enable the service before you enter the IP address you want to block, and press **Add**. Click **Delete** to remove an IP address from the list.



Chapter 5-3-3 UPnP Settings

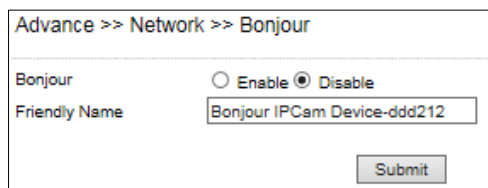
The UPnP service is a network protocol that allows Windows PC users to identify IP cameras in a LAN environment. To activate the UPnP service, choose Enable to activate.



In Windows, go to **Network→File Explorer** to see the IP cameras via the UPnP protocol.

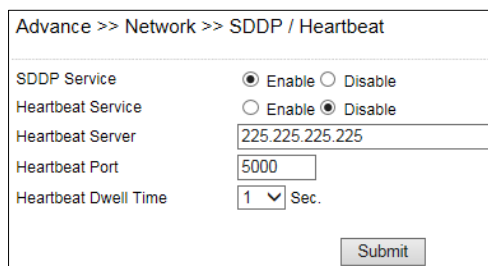
Chapter 5-3-4 Bonjour

Bonjour is Apple's implementation of zero-configuration networking protocol. Click Enable to activate this service.



Chapter 5-3-5 SDDP/Heartbeat

With SDDP/Heartbeat support, you can connect to any compatible devices. Enable the service before you make the connection.



Chapter 6 Camera Event



Here you can configure the detection settings for motion, alarm, audio, and network failure. Choose an event type for entering the event name and event condition for firing an alarm. Click **Save** button for saving the event.

Advance >> Event >> Event

Event Name: Motion Detection Edit Event

Event	Status	FTP	SMTP	SD Card	Alarm Output	HTTP POST	SNMP Trap	PUSH	Schedule
Motion Detection	Disable								Auto
Audio Detection	Disable								Auto
Alarm Detection 1	Disable								Auto
Alarm Detection 2	Disable								Auto
Alarm Detection 3	Disable								Auto
Alarm Detection 4	Disable								Auto
Alarm Detection 5	Disable								Auto
Alarm Detection 6	Disable								Auto
Network Detection	Disable	-	-			-	-	-	Auto

Then the page you see allows you to choose the action to take when the chosen events are detected, such as sending JPEG images to an FTP server or an email account, and/or triggering SD card video recording. To schedule event monitoring, choose Schedule when you edit an event and highlight the time periods you want the camera to detect events. Click Submit for the changes to take effect.

Event: Motion Detection

Enable: ☒

Action:

- ☐ FTP Service Dwell Time: Sec.
- ☐ SMTP Service Dwell Time: Sec.
- ☐ SD Card Service Dwell Time: Sec.
- ☐ Alarm Output Dwell Time: Sec.
- ☐ HTTP POST Service Dwell Time: Sec.
- HTTP POST Service : URL
- ☐ SNMP Trap Service
- ☐ Push Notification Service Dwell Time: Sec.

Schedule:

☐ Always

☒ Schedule

	0:00	6:00	12:00	18:00
Sun				
Mon				
Tue				
Wed				
Thu				
Fri				
Sat				

■ Event Schedule
■ Not Scheduled

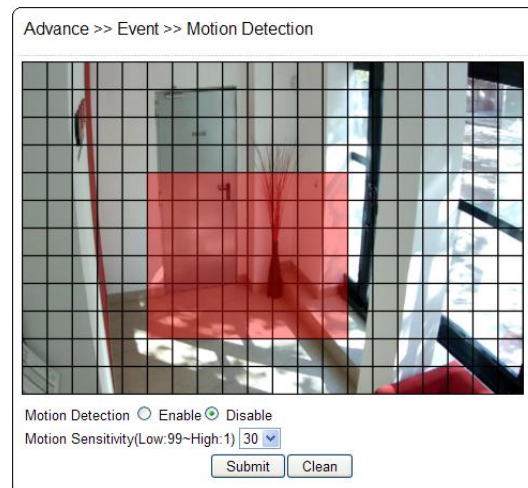
Submit Cancel

- **FTP Service:** When an alarm is triggered, snapshots will be sent to a pre-determined FTP site during the specified time.
- **SMTP Service:** When an alarm is triggered, snapshots will be sent to pre-determined Email addresses during the specified time.
- **SD Card Service:** When an alarm is triggered, snapshots will be saved to the inserted SD card during the specified time.
- **Alarm Output:** When an alarm is triggered, alarm notifications will be sent to the external device

- connected to the camera during the specified time.
- **HTTP POST Service:** Enter a URL, and when an alarm is triggered, snapshots will be posted to the website during the specified time.

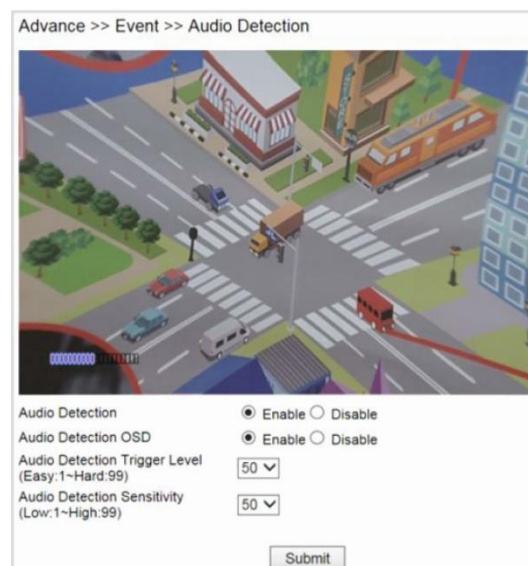
Chapter 6-1 Motion Detection

Once the above configurations are set, click Motion Detection to determine the areas to monitor. Simply double-click or drag across the areas you want to monitor, and cancel your selection by double-click again or drag across the areas you don't want to monitor with the right mouse button.



Chapter 6-2 Audio Detection

When the detected sound exceeds the sensitivity level, the audio detector will trigger an alarm and send a notification.



Note: Audio model only

Chapter 6-3 Alarm Detection

If you connect an external alarm digital input to the IP camera, enable Alarm Notification and switch between NO (normally open) and NC (normally closed) for the input.

Advance >> Event >> Alarm Detection

Alarm Notification 1	☐ Enable ☒ Disable
Alarm Notification 2	☐ Enable ☒ Disable
Alarm Notification 3	☐ Enable ☒ Disable
Alarm Notification 4	☐ Enable ☒ Disable
Alarm Notification 5	☐ Enable ☒ Disable
Alarm Notification 6	☐ Enable ☒ Disable
Alarm Input Mode	☒ NO ☐ NC
Alarm OSD	☐ On ☒ Off
Alarm To Preset 1	☒ On ☐ Off
Alarm To Preset 2	☒ On ☐ Off
Alarm To Preset 3	☒ On ☐ Off
Alarm To Preset 4	☒ On ☐ Off
Alarm To Preset 5	☒ On ☐ Off
Alarm To Preset 6	☒ On ☐ Off
Alarm Time Set	Off Min.

Submit

Note: Alarm model only

Chapter 6-4 Network Detection

Enable this option to send a notification upon network failure.

Advance >> Event >> Network Detection

No Network Activity	☐ Enable ☒ Disable
---------------------	---

Submit

Chapter 6-5 Push Service Setting

The PTZ camera can send push notifications to Apple or Android devices that have the LILINViewer App installed and the camera added. The PTZ camera and receiving device must have internet connectivity for this feature to work. Push Notifications can be configured to be sent on different event triggers. Moreover, if there's connected mobile phone, the connected user will show in Push Service setting ID. To set up, click on SmartEvent -> Event1 -> Edit -> Select Trigger and Schedule -> Action -> tick on Push Service box -> Save the event.

Advance >> Event >> Push Service Setting

Key Version 20190520

iOS			
Number	ID	Action	Status
1		Delete	
2		Delete	
3		Delete	
4		Delete	
5		Delete	

Android			
Number	ID	Action	Status
1		Delete	
2		Delete	
3		Delete	

Chapter 7 Camera Notification

System Video / Audio Network Event **Notification** Maintenance PTZ

Chapter 7-1 FTP Service

Enter the required FTP information to send alarm snapshots to an FTP server.

Advance >> Notification >> FTP Service

FTP Server IP/DNS

FTP Server Port

Account

Password

Directory

Prefix

Date Format

Posfix

File Format

Auto FTP Sent ☐ Enable ☒ Disable

Auto FTP Sent Dwell

- **FTP/DNS Server:** IP address or domain name of the FTP server.

- **FTP/DNS Server Port:** The FTP Server Port.
- **Account:** Account name to log in to the FTP server.
- **Password:** Password of the account.
- **Directory:** File path for storing the JPEG snapshots.
- **Date Format:** Date string for the JPEG filename.
- **Prefix:** Prefix of the JPEG filename.
- **Postfix:** Postfix of the JPEG filename.
- **File Formation:** Name string for JPEG filename.
- **Auto FTP Sent:** Enable this function to send alarm notification and snapshots to the designated FTP server.
- **Auto FTP Sent Dwell:** Choose a dwell time from the drop-down menu.

Chapter 7-2 SMTP (Email) Service

For alarm notification with JPEG snapshots, enter the required information to enable this Email notification service.

Advance >> Notification >> SMTP Service

E-mail Receiver Setting

E-mail Address1

E-mail Address2

E-mail Address3

E-mail Address4

E-mail Address5

E-mail Sender Setting

E-mail Address

SMTP Server

SMTP Authentication ☒ AUTH LOGIN ☐ AUTH SSL

SMTP Port

Authentication ☐ Enable ☒ Disable

Auth Account

Auth Password

Submit Send Mail & Status

Chapter 7-3 HTTP POST Service

Through the POST protocol, the camera can automatically send notification snapshots to a website if an alarm is triggered.

Advance >> Notification >> HTTP POST Service

HTTP POST Server IP/DNS

HTTP POST Server Port

Account

Password

JPEG Attachment ☐ Enable ☒ Disable

Attachment File Format ☐ Fixed ☒ Date

Attachment File Name

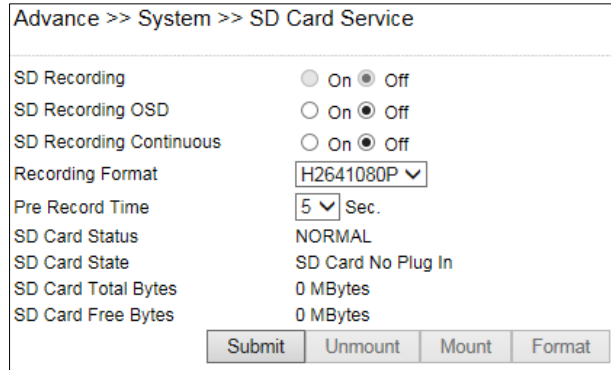
Submit

- **HTTP POST Server IP/DNS:** The IP/DNS address of the HTTP Post server
- **HTTP POST Server Port:** The port number of the HTTP Post server
- **Account:** the account

- **Password:** the password
- **JPEG Attachment:** Enable or Disable JPEG attachment
- **Attachment Format:** Fixed or Date mode
- **Attachment Format Name:** Enter attachment file name

Chapter 7-4 SD Card Service

Ensure a SD card is properly installed to the camera before you enable the SD recording option. The camera will start recording videos when an alarm occurs.



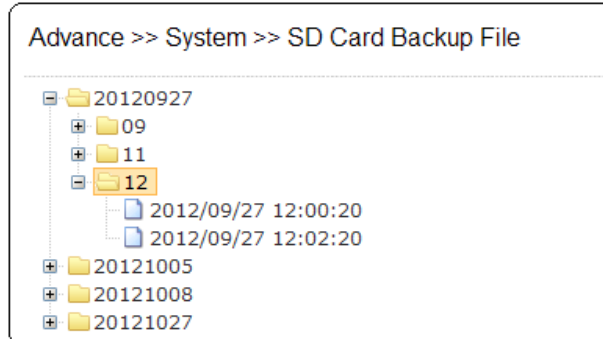
Advance >> System >> SD Card Service	
SD Recording	☐ On ☒ Off
SD Recording OSD	☐ On ☒ Off
SD Recording Continuous	☐ On ☒ Off
Recording Format	H2641080P
Pre Record Time	5 Sec.
SD Card Status	NORMAL
SD Card State	SD Card No Plug In
SD Card Total Bytes	0 MBytes
SD Card Free Bytes	0 MBytes
Submit Unmount Mount Format	

Warning: Ensure to click **Unmount** before removing the SD card, or the system may crash.

Note: SD card model only

Chapter 7-5 SD Card Backup

To download a specific clip, right-click the file you want to download and save the AVI file to a local PC.



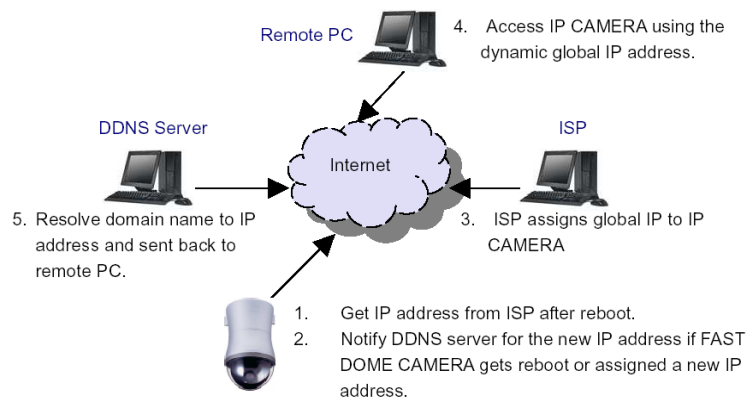
Advance >> System >> SD Card Backup File	
20120927	
09	
11	
12	
2012/09/27 12:00:20	
2012/09/27 12:02:20	
20121005	
20121008	
20121027	

Appendix

DDNS and PPPoE Network Settings

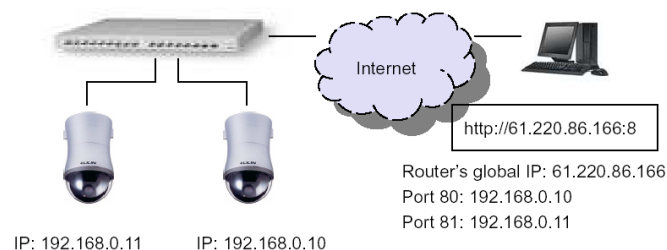
One of the advantages of adopting DDNS and PPPoE services is to save the cost of renting a global IP address. When you power on a camera with a video server and connect to the Internet with the PPPoE service, the camera asks your ISP for a dynamic global IP address. This Internet-accessible IP address will be renewed by the ISP every time you log on the Internet.

Whenever the IP is changed, the camera with the video server will notify the DDNS server of your new IP address. A remote user who intends to connect to the camera with the video server can enter the domain name in the web browser. The domain name will be translated to a new IP address to be used by the camera.



Advanced Port Forwarding Technology

Communication port forwarding technology has been widely used to share a global Internet IP to other devices on the network. The infrastructure of this technology is shown in the below figure, in which the port 80 of the IP router is forwarded to the device with an IP of 192.168.0.10, and the port 81 of the router is forwarded to the device with an IP of 192.168.0.11. When a remote PC on the Internet tries to access the port 81, the user is actually accessing 192.168.0.11, private IP given by the router.



Restore to Factory Default

To restore the IP camera to the factory default, follow the below procedures:

Short the "Restore to Factory Default RESET" cable for 10 seconds before releasing.

The camera will restart.

Launch to IPScan Utility to search for the IP camera.

Access the IP camera via an Internet browser.

Enter the default username and password.



SD Card Compatibility

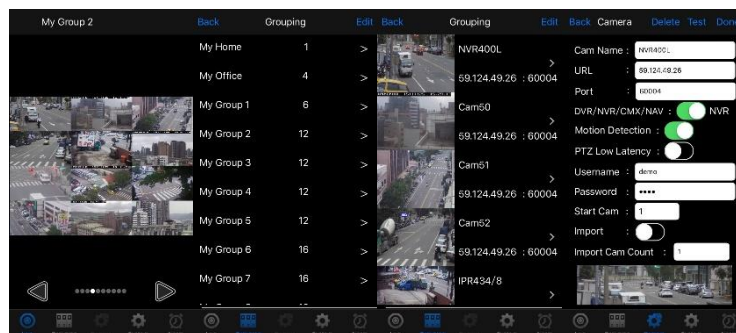
Manufacturer	Capacity	SDHC/SDSC
Sandisk	16GB	SDHC
Sandisk	8GB	SDHC
Transcend	8GB	SDHC
Transcend	4GB	SDHC
Sandisk	32GB	SDHC

For iPhone Users

Tap App Store, and search and download LILINViewer by Merit LILIN Ent. Co., Ltd. Or, you can scan the QR Code below.



Open LILINViewer, then choose tab Groupings. Select a group, choose a camera type, and add a camera.



Next, enter camera information as follows:

1. **Cam Name:** IP Camera or DVR camera name
2. **URL:** IP address
3. Port
4. Enter your username and password.

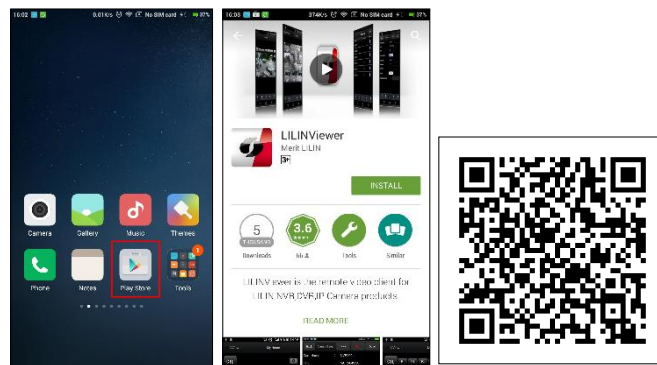
The default IP camera user name is admin, password pass. The default DVR user name is admin, password 1111.

After you enter the above information, tap Done to save the changes, and the live view of your IP camera or DVR will appear.

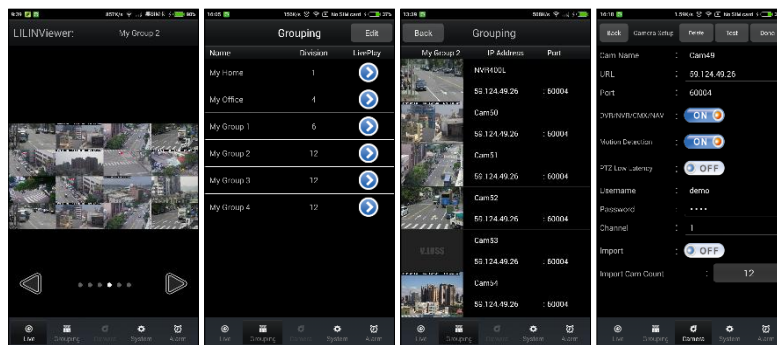


For Android Users

Tap Play Store to download LILINViewer by Merit LILIN, or scan the following QR code.



Open LILINViewer, then choose tab Groupings. Select a group, choose a camera type, and add a camera.



Next, enter camera information as follows:

1. **Cam Name:** IP Camera or DVR camera name
2. **URL:** IP address
3. Port
4. Enter your username and password.

The default IP camera user name is admin, password pass. The default DVR user name is admin, password 1111. After you enter the above information, tap Done to save the changes, and the live view of your IP camera or DVR will appear.