

User 's Manual

Model No.: IP-901

Weatherproof Day/Night Network Camera

Hardware Installation & Web Configuration



PLEASE READ CAREFULLY AND SAVE

This manual contains important information about this product's operation.
If you are installing this product for others, you must leave this manual -or a
copy- with the end user.

Table of Contents

LIST OF FIGURES AND TABLES	4
1. INTRODUCTION	6
2. HARDWARE DESCRIPTION AND QUICK INSTALLATION/USAGE	8
2.1. MAJOR HARDWARE COMPONENTS	8
2.2. QUICK INSTALLATION AND USAGE	8
3. WEB CONFIGURATIONS	12
3.1. INFORMATION	13
3.2. VIDEO DISPLAY	14
3.3. NETWORK	15
3.4. ADVANCED NETWORK	17
3.5. VIDEO SETTINGS	18
3.6. 3GPP/RTSP SETTINGS	20
3.7. MOTION DETECTION	22
3.8. NIGHT MODE CONTROL	24
3.9. DATE/TIME	25
3.10. ADMIN	26
3.11. UPGRADE	27
3.12. REBOOT	29
3.13. SAFE MODE	31
3.14. SET TO FACTORY DEFAULT	32
4. FEATURES AND SPECIFICATIONS	33
4.1. FEATURES	33
4.2. SPECIFICATIONS	34
5. PACKAGE CONTENTS	36
APPENDIX A. LIST OF TESTED NAT/ROUTER DEVICES	37
APPENDIX B. MAXIMUM ALLOWED VIDEO USERS	38
APPENDIX C. PERFORMANCE INFORMATION	39

Model IP901 Weatherproof Day/Night Network IP Camera	
APPENDIX D. TROUBLE SHOOTING	40
APPENDIX E. 3GPP/ISMA OPERATION	42
APPENDIX F. THIRD PARTY AND EMBEDDED WEB PAGE INTEGRATION.....	43

Model IP901 Weatherproof Day/Night Network IP Camera

1. Introduction

The IP Network Camera is designed with the “user-friendly” idea deep in mind. The user can install the IP Camera easily on his/her home network and then access the IP Camera anywhere in the world through the accompanied video management software - CamView without setting some complicated DNS name or changing the router’s settings. It’s just a plug & play action.

With 3GPP/ISMA support, users can see the video of the IP camera on any 3G mobile phone anywhere, anytime. The big difference is that there is software for downloading to the mobile phone so that the fixed IP address is not needed for the IP camera. The video settings including frame rate, resolution and bandwidth could be different for PC monitoring and mobile viewing.

For outdoor surveillance and remote monitoring, the IP Camera provides the best image quality in its class, and excellent performance. It also provides the best bandwidth efficiency, offers 640x480 resolution, 30 fps frame rate, real MPEG4 image compression ability.

With the very low light sensitive sensor and IR led inside the IP66-rated water proof housing, the IP Camera can work day and night and satisfy all security and indoor/outdoor surveillance needs. With the motor controlled IR-cut filter, the day-time video quality is not affected by the infrared light in the sun light. The IR-cut filter is automatically turned on during dark light.

With the built-in Web server, the IP Cameras can also be managed from a standard web browser on a Windows computer or a Macintosh.

The IP Camera provides motion detection function. Users can easily setup this function and receive the notification with the snapshot images through email and/or ftp when some motion events are detected.

The IP camera is ideal for securing small businesses, home offices and residences over a local area network and/or the Internet.

The differences

It’s very easy to see the video of the IP Cam, you only need to key in the ID/Password of the IP CAM any where in the world, you do not need to remember the IP address or domain name or DDNS name or port number. And you do not need to modify the settings(like port

Model IP901 Weatherproof Day/Night Network IP Camera

mapping, fixed IP, DDNS, virtual server) of the NAT/router devices, it's just a plug & play usage.

So, the differences are the followings:

- ◆ **Public IP address needed ?** **No**
- ◆ **Dynamic DNS needed ?** **No**
- ◆ **Port mapping in router?** **No**
- ◆ **Virtual server in router ?** **No**
- ◆ **UPnP support in router ?** **No**
- ◆ **What's needed ?** **ID and Password**

2. Hardware description and quick installation/usage

The IP CAM is designed to be very easy to install and use. First, let's see the major components of the IP CAM products.

2.1. Major hardware components.

The major components of the IP CAM products are listed below :

1. Lens – the focus of the lens is fixed, you do not need to spend time to adjust the focus, the effective focus range is from 30cm to infinity.
2. IR LEDs – there are totally 40 IR LEDs that can provide approximately 30m distance night vision.
3. EDS – this light detector can detect when the light is becoming dark and turn on the IR LEDs automatically.
4. DC Power Connector – this is the place to plug in the power adaptor. The power needed for this IP CAM is 12V/1.0A, please make sure you are using the correct power adaptor.
5. Network Cable Connector – this is the place to plug in the RJ45 Ethernet cable.
6. Reset button – this is the button to reset the IP CAM to default factory settings. You need to press the reset button for more than 4 seconds to enable the reset function. Usually when you forgot the administrator account, you will probably need to do this reset action to reset to the default factory settings. Please refer to section 3.16 for more details.

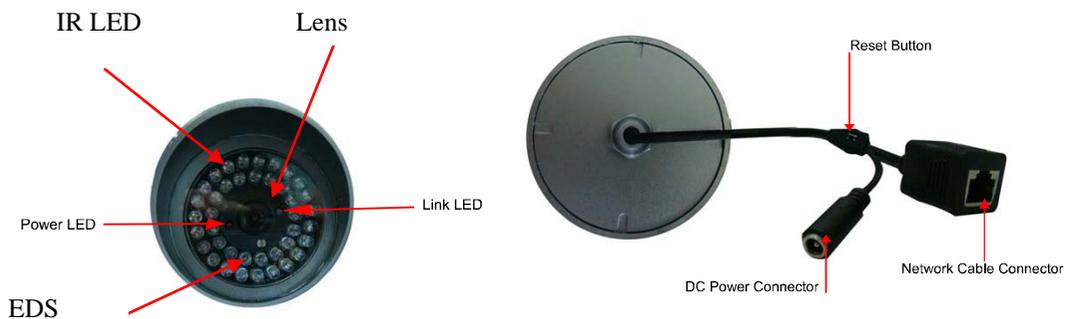


Figure 2-1: Major components of the IP camera

2.2. Quick installation and usage

There are only three things that you need to do to see the video from the IP CAM.

1. Connect the IP CAM to the home network.
2. Install the CamView software on the notebook/PC.
3. Key in the ID/password of the IP CAM(from the IP/Password sticker on the software installation CD provided with the package) on the CamView, and then you can see the video.

First, Connect the IP CAM to the home network

Please connect the IP CAM accessories to the IP CAM body correctly, including the bracket, power adapter and Ethernet cable, as shown in Figure 2-2. And connect the other end of the Ethernet cable to the home network router. Usually, this Ethernet cable is plugged into a home NAT/router device, as shown in Figure 2-2. Since the default settings of the IP CAM use DHCP function and very often there is a DHCP server on most of the Home network, the IP CAM should be connected to the Internet immediately. It is recommended to connect IP camera directly to NAT router but not through a hub.

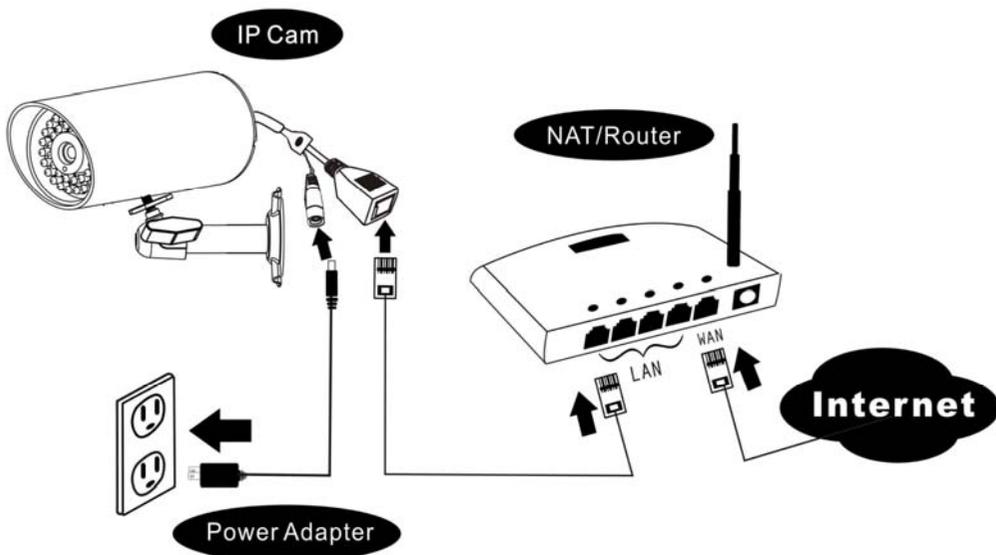


Figure 2-2: IP CAM connection diagram.

Model IP901 Weatherproof Day/Night Network IP Camera

Second, Install the CamView software on the notebook/PC

Please insert the installation CD into the CD-ROM drive in your notebook or personal computer (must be running Microsoft Windows OS). Execute the program CamViewInstaller-xxx.exe on the disk. The program will pop-up some windows about the installation options, please press the “next” button to proceed with the installation. After the installation is complete, there will be a CamView icon on the desktop of your computer screen, please execute this icon. The CamView program will run immediately.

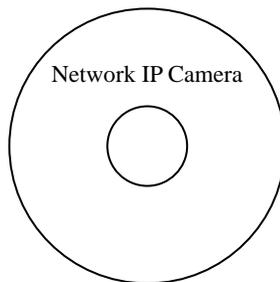


Figure 2-3: The installation CD disk

Third, Use CamView program to see the video

Figure 2-5 is the running window of the CamView program. Note that the computer and IP CAM MUST connected to the same network AND under the same LAN, the IP CAM ID will be displayed in the “Auto Search” list. You can double click the “Auto Search” to search all the connected IP CAMs any time. The only thing left right now for seeing the video is to double click the IP CAM ID item in the “Auto Search” list. For example, if the IP CAM ID is 123-456-789, you can then double click the 123456789 item in the “Auto Search” list to view the video. A window asking for password input will pop up. Please key-in the password in your ID/Password sticker on the installation CD into this field and click “ok”. The video will then be displayed on the window.

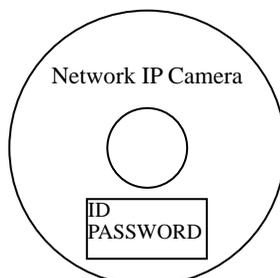


Figure 2-4: The ID/Password card

Model IP901 Weatherproof Day/Night Network IP Camera

Notice :

1. You can modify this play-video password by entering into the web configuration pages. Please refer to [section 3.6](#) for more information.
2. You can also add the IP CAM into the CameraList in the CamView software to have more convenient video display, please refer to the latter sections regarding to CamView utility software for more functions.

Seeing the video in a remote location

After the IP CAM is installed and you can see the video from the CamView software in the local network, it's very easy to see the video in a remote location. All you need to do is add a camera item in the "CameraList" folder of the CamView software, key in the IP CAM ID and Password(from the IP/Password sticker on the software installation CD provided with the package). And then double click this camera item. You will then see the Camera video immediately. No further NAT/router setting modifications are needed.

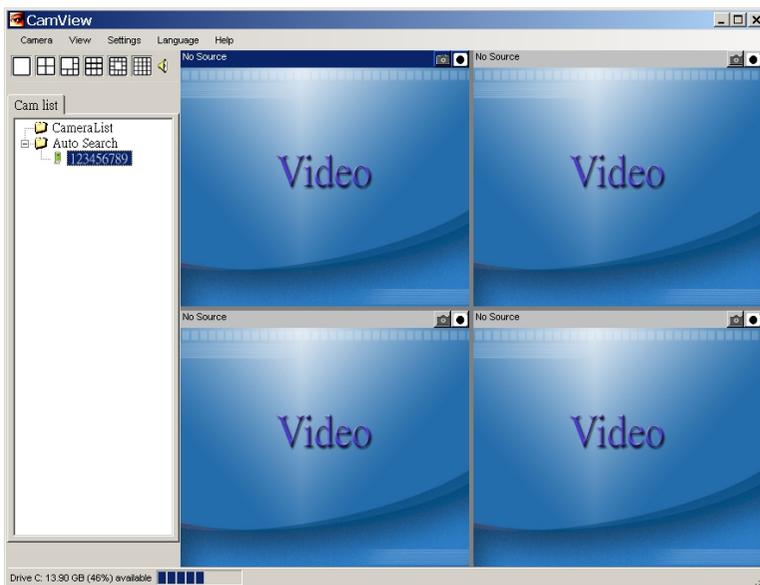


Figure 2-5: Running window of CamView program

Model IP901 Weatherproof Day/Night Network IP Camera

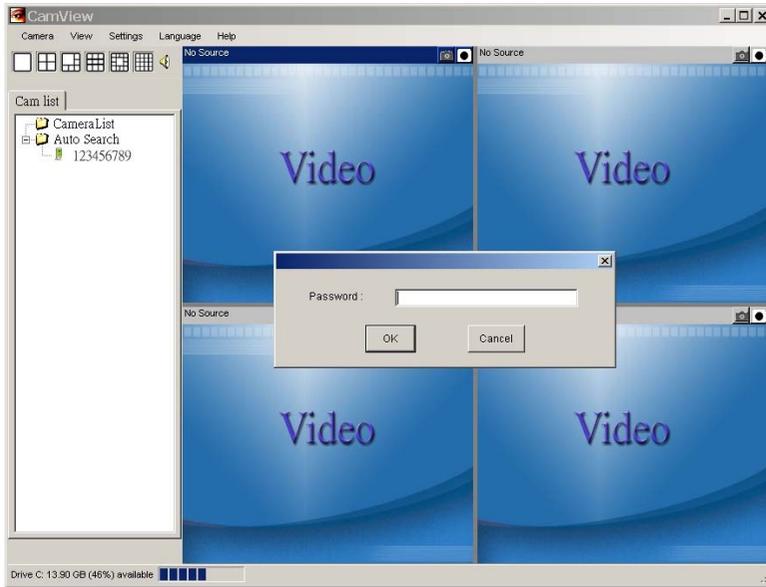


Figure 2-6: Pop-up play-video password window

Model IP901 Weatherproof Day/Night Network IP Camera

3. Web configurations

You can login into the web configuration page by directly key-in the IP address of the IP CAM or right-click the searched IP CAM in the “Auto Search” list of the CamView software and click the “Web Configure” to open the login window of the IP CAM.

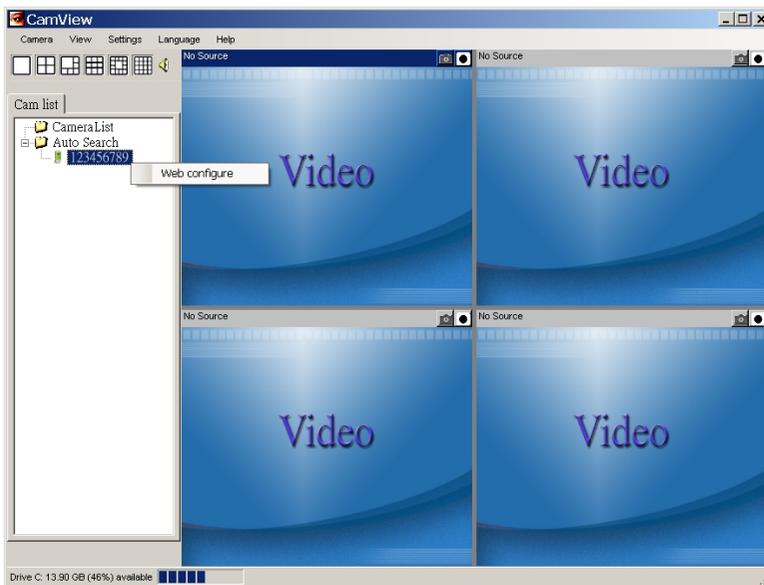


Figure 3-1: Open the web configuration page from CamView software

The default login account is “admin”, leave the Password field empty.



Figure 3-2: IP CAM Web configuration login page

Model IP901 Weatherproof Day/Night Network IP Camera

3.1. Information

The first page of the web configuration of the IP CAM is the information page. You can see the model name/firmware version, IP CAM ID, registration status, network type and current video settings(bandwidth, resolution) in this page.

The IP CAM can be viewed remotely by the CamView software only when the IP CAM is registered. If this IP CAM is not registered, please check the Ethernet wiring of your network environment. The “Network type” field displays the network connection(wired or wireless) and method(DHCP, PPPoE or static ip) the IP CAM is running. The “Video users” field displays the number of connected video viewing users.

IP CAM Information	
Model	wired / v020202
IP CAM ID	123-456-789
Registration status	Registered(3+uPnP)
Network type	Wired(DHCP) - (ip=192.168.0.150)
Video user	0
Video resolution	640 x 480
Video bandwidth	1.5M bps
Email/ftp Alarm	off
NAS Record	Not Recording
Mac Address(Hex)	01:2C:3F:10:35:17

Figure 3-3: IP CAM Information page

Model IP901 Weatherproof Day/Night Network IP Camera

3.2. Video Display

This display page allows you to view the video display of the IP camera. For the first time use of this display on a computer, an activeX component will be automatically downloaded into the browser. This could take some time, depends on the internet speed. The component is downloaded from a public domain, so that the computer must be connected to the Internet.

If you want to modify the video display screen size, please refer to [section 3.6](#) for more details.



Figure 3-4: Video display page

Model IP901 Weatherproof Day/Night Network IP Camera

3.3. Network

The Network page allows you to modify the network settings of the wired Ethernet. The default settings use DHCP to obtain an IP address automatically. In most of the home network environment, there is a DHCP server running. In this situation, by using these default settings, the IP CAM can work immediately in most of the time.

If the Ethernet cable is unplugged, the IP CAM will lose connection. But as soon as the Ethernet cable is plugged in again, the IP CAM will obtain a new IP address immediately.



The screenshot shows the 'Network Settings (For wired ethernet)' page of the IP camera's web interface. The page has a blue sidebar on the left with navigation options: Information, Network, Wired Network (selected), Advanced, Video, Schedule, and Admin. The main content area has a green header and contains the following settings:

- Obtain an IP address automatically
- Use the following IP address
- IP address: 192 . 168 . 1 . 123
- Subnet mask: 255 . 255 . 255 . 0
- Default gateway: 192 . 168 . 1 . 1
- Obtain DNS server address automatically
- Use the following DNS server address
- Preferred DNS server: 168 . 95 . 1 . 1
- Alternate DNS server: 168 . 95 . 192 . 1

A 'Save & Apply' button is located at the bottom of the settings area.

Figure 3-5: Network settings page for DHCP function

If the network environment does not support DHCP function or you have a Static IP address, you will need to set the network settings of the IP CAM manually. Please fill all the fields including “IP address”, “Subnet mask”, “Default gateway” and “DNS server” to let the network work. All these settings must be correct for your network environment, otherwise the IP CAM can not work. If you are not sure about the IP setting, please contact your Internet Service Provider for further help.

The default setting is “Obtain an IP address automatically”.

Model IP901 Weatherproof Day/Night Network IP Camera

Seeing the video from anywhere

Outdoor IP Camera

The camera is made from aluminum, the strongest for such the kind. It has the weather proof and comes in factory setting. It has the best of protection, waterproof, fireproof and rustproof, quality and performance. Based on the best elements of the camera of the other 1 series.

Network Settings (For wired ethernet)

Obtain an IP address automatically

Use the following IP address

IP address: 192 . 168 . 1 . 123

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 1 . 1

Obtain DNS server address automatically

Use the following DNS server address

Preferred DNS server: 168 . 95 . 1 . 1

Alternate DNS server: 168 . 95 . 192 . 1

Save & Apply

Figure 3-6: Network settings page for Static IP address

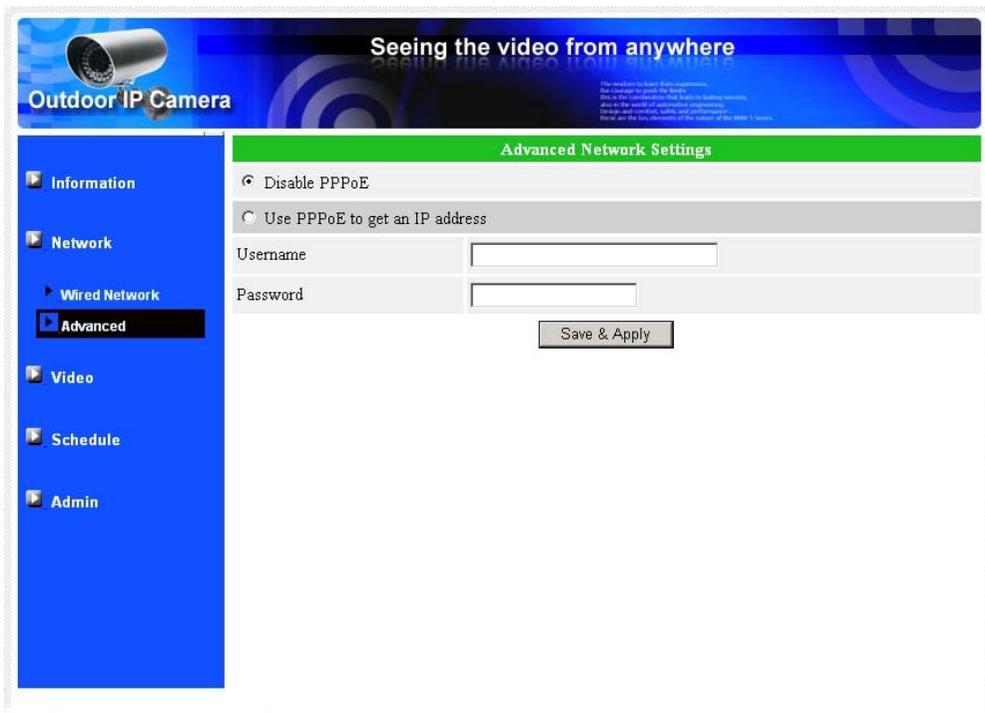
Model IP901 Weatherproof Day/Night Network IP Camera

3.4. Advanced Network

In some special situation, your network environment only provides PPPoE connection (xDSL service), there is no NAT/router available. You will then need to set the PPPoE settings in the “Advanced Network” page. Only the PPPoE username and password are needed to let PPPoE work. After the “Save&Apply” button is pressed, the PPPoE function will work immediately. You can check the “Registration status” in the “Information” page to see if the IP CAM is registered using the PPPoE connection.

Please be noticed that the DHCP or static IP settings in the “Network” page can work together with the PPPoE connection. Only that the PPPoE has higher priority, so, if the PPPoE is working, the IP CAM will use PPPoE to connect to the Internet.

The default setting is “Disable PPPoE”.



The screenshot displays the web interface for an Outdoor IP Camera. At the top, there is a banner with the text "Seeing the video from anywhere" and "Outdoor IP Camera". Below the banner is a navigation menu on the left with options: Information, Network, Wired Network, Advanced (selected), Video, Schedule, and Admin. The main content area is titled "Advanced Network Settings" and contains two radio button options: "Disable PPPoE" (selected) and "Use PPPoE to get an IP address". Below these options are two input fields labeled "Username" and "Password". A "Save & Apply" button is located at the bottom of the form.

Figure 3-7: Advanced network settings page

Model IP901 Weatherproof Day/Night Network IP Camera

3.5. Video Settings

The IP CAM is designed to provide high quality video for viewing from CamView software. In this page, you can modify some settings related to the video viewing:

1. Password(play video) – this is the password needed for viewing the video from the CamView software. Together with the IP CAM ID, you can view the video of this IP CAM anywhere in the world through the Internet.
2. Internet speed – this is the Internet bandwidth of your network environment. Higher value will generate higher video quality. But if your internet connection can not provide more bandwidth than the specified value, the video quality could degrade. So, please key in a value that is lower than your internet bandwidth.
3. Select resolution & frame rate automatically – you can let the system select the suitable video resolution and frame rate automatically for you. The selection is based on the “Internet speed” value. This is the recommended default setting.
4. Resolution – there are three choices: 160x120, 320x240 and 640x480. If you decide to choose the value manually, you can choose one of the three values. But, please be noticed that if the Internet speed is slow (low value), high resolution (640x480) or high frame rate could cause inferior video quality.
5. Frame rate – the video frame display rate. Higher value means faster movement and continuity in the video display.
6. Favor/Preference – choose between “Video motion” and “Image quality”. When the real bandwidth is not enough for the selected “Internet speed”, the system will need to degrade the video motion or image quality. This selection will decide if the user want to maintain the “video motion” or “image quality” when the internet speed is not good enough.
7. Brightness – the brightness of the video, lower value means darker display.
8. Sharpness – the sharpness of the video, lower value means less sharp display.
9. Low light sensitivity – The low light sensitivity could be normal, high or very high. When the low light sensitivity is high, the system could see better video clearance under low light situation, but the moving object will not be very clear under this low light environment. Under very dark environment, set to “very high” will get better video clearance. The default value of this setting is “high”.
10. Video color – choose between “colored” and “black&white”.
11. Outdoor/Indoor video – for better video display quality, modify this setting when taking indoor or outdoor video. The default setting is “Outdoor video”, in most cases; this is also ok for indoor usage. Under some special cases, there could be some strip lines on the video

Model IP901 Weatherproof Day/Night Network IP Camera

display when the IP camera is taking indoor video. In this situation, change the setting to “Indoor video” will solve the problem. Please also be noticed that in “Indoor video” setting, the video display of outdoor view is very vague. For indoor usage, if there is strong sun light into the room, please select the “Indoor+sun light” choice.

12. Enable/disable time display on video – if enabled, the date/time of the system will be displayed on the left-upper corner of the video.

When this modification is “Save&Apply”ed, it works immediately, but all the connected video viewing users will be disconnected.



Figure 3-8: Video settings page

Model IP901 Weatherproof Day/Night Network IP Camera

3.6. 3GPP/RTSP settings

The IP CAM is able to be viewed from a 3G mobile phone, for detailed settings on the 3G mobile phone, please refer to Appendix E.

Users can disable the 3G mobile access ability in this page. After the 3GPP/RTSP feature is disabled, no 3G mobile phone is allowed to access the video of the IP camera. When this is disabled, the rtsp stream with MPEG2 audio is still working, please refer to Appendix F for more details about rtsp stream with MPEG2 audio.

When the 3GPP is enabled, the video frame rate, resolution and bandwidth for 3G mobile access could be set independently from the video settings for CamView(PC) access. The maximum allowed resolution is 352x255 and maximum allowed bandwidth is 256 kbps.

The “Access URL” line is the url address for 3G mobile phone to input for seeing the video of the IP camera. Different 3G mobile may need to input this url in different way, detailed information could be found in the user manual of different 3G mobiles. Please be noticed that usually public IP address is needed for the IP camera, so that the 3G mobile could access the IP camera’s video.

The default setting is “Enable 3GPP/RTSP”.

The screenshot shows the '3GPP/RTSP Settings' page. On the left is a blue navigation menu with options: Information, Network, Video (with sub-options Display and Video Settings), 3GPP/RTSP (highlighted), Schedule, and Admin. The main content area has a green header '3GPP/RTSP Settings'. Below it are two radio buttons: 'Enable 3GPP/RTSP' (selected) and 'Disable 3GPP/RTSP'. A '3GPP bandwidth' field is set to '256Kbps'. There are two radio buttons for resolution and frame rate: 'Select resolution & frame rate automatically' (deselected) and 'Use the following values' (selected). Under 'Use the following values', 'Resolution' is set to '160x120(Q2VGA)' and 'Frame rate' is set to '15fps'. The 'Access URL' field contains 'rtsp://192.168.0.150/001037130.ipcam'. A notice below reads: '* Notice : usually, public IP address is needed for 3G mobile access!'. At the bottom is a 'Save & Apply' button.

Figure 3-9: 3GPP/RTSP enabled page

3.7. Schedule

The IP CAM provides a variety of security alert and record functions, you can schedule and enable these security functions in this section, the IP CAM will then follow the preset schedule to send out an email with a jpeg picture attached in the email and/or send out the jpeg picture file to a ftp server and/or record to a physical NAS (Network Attached Storage). The related settings are explained below:

1. Email/FTP Trigger – there are three possible choices in this field.
 - “Motion”: Email and/or FTP message is sent by motion triggered event.
 - “Schedule”: Email and/or FTP message is sent according to the preset schedule.
 - “Disable”: There will not be any Email and/or FTP message.
2. Motion Sensitivity – there are three possible choices in this field.
 - “High” means high sensitivity, i.e., the detection is triggered by a very small movement in the video image. If “High” is selected and the size of the moving object is larger than about 1% of the whole video area, it is detected. Please be noticed that the real size of the object could be large or small, anyway, the detection is only based on the relative size of the object. Probably a small pencil moving near the IP CAM could be detected, but a moving car far away from the IP CAM could not be detected.
 - “Low” means low sensitivity, i.e., the detection is triggered by a very large movement. If the size of the moving object is larger than about 10% of the whole video area, it is detected.
 - “Median” means 3% to trigger the detection.
3. Send email message – if this item is enabled, the IP CAM will send out an email message with the jpeg picture attached to the specified email account.
4. Send FTP message – if this item is enabled, the IP CAM will send out an email message with the jpeg picture attached to the specified FTP server defined after.
5. Email recipient – this is the email address to receive the detection notice message. An email message with the jpeg picture file named by the date/time of the triggered moment will reach this address.
6. SMTP server – this is the SMTP server that will help to transfer the email message. This server is irrelevant to the “Email recipient” address.
7. SMTP username/password – this is the account to use the SMTP server to transfer the email message. The SMTP server and username/password account are only for transfer the email message to the “Email recipient”, the “Email recipient” could be on another email server or any reachable email address. The username and password fields could be left empty if no authentication is needed for the SMTP server.

Model IP901 Weatherproof Day/Night Network IP Camera

8. SMTP server test – after the settings are filled, you could press “SMTP server test” to check if all the settings are correct.
9. Send FTP message – if this item is enabled, the IP CAM will send out a jpeg picture file to the specified ftp account.
10. FTP server – this is the FTP server address to receive the jpeg file.
11. FTP username/password – this is the username/password to login into the FTP server, so, this triggered jpeg file will be allowed to reach this FTP server.
12. Remote folder – the jpeg file will be put under this folder of the FTP server.

When this modification is “Save&Apply”ed, it works immediately, but all the connected video viewing users will be disconnected.

The default setting is “Disable Motion Detection”.

Seeing the video from anywhere

Outdoor IP Camera

Information

Network

Video

Schedule

Email/ftp Alarm

NAS Settings

Scheduling

Admin

Email/FTP Alarm Settings

Email/FTP Trigger Motion Schedule Disable

Motion sensitivity

Send Email message Send FTP message

Email recipient

SMTP server port

SMTP Username

SMTP Password

FTP Server

Username

Password

Remote folder

Save & Apply SMTP server test

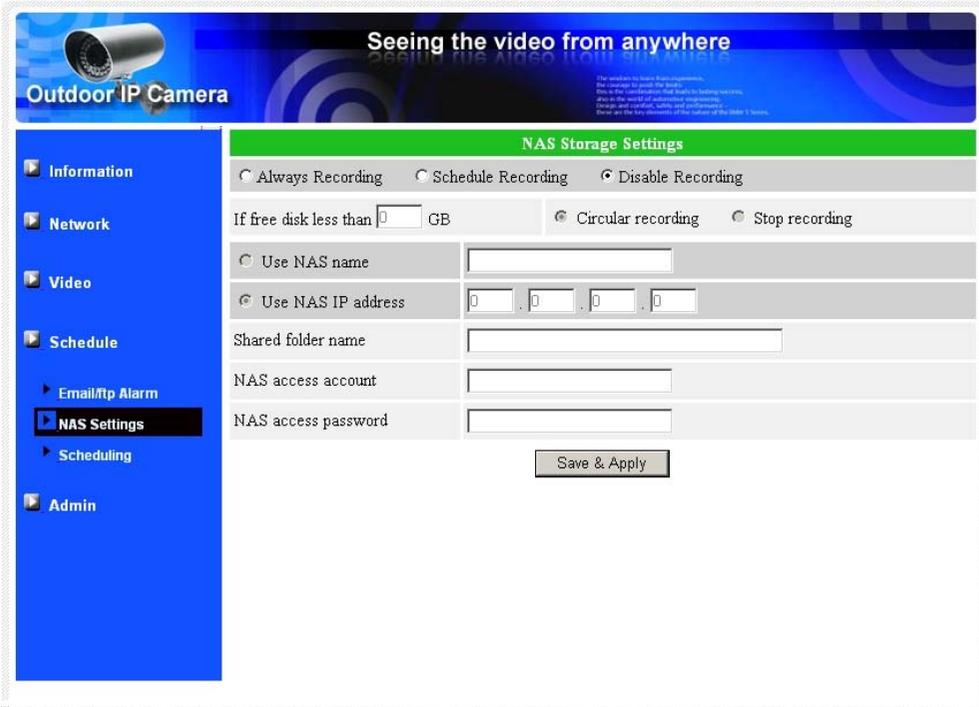
Figure 3-10: Motion detection disabled page

Model IP901 Weatherproof Day/Night Network IP Camera

3.8. NAS Settings

The IP CAM allows you to record to your physical NAS (Network Attached Storage) device. The related settings are explained below:

1. NAS Recording: choose between “Always”, “Schedule” and “Disable”. The default setting is “Disable Recording”.
2. In the following settings, you can input your NAS related information.



The screenshot shows the 'NAS Storage Settings' page of the camera's web interface. The page has a blue header with the text 'Seeing the video from anywhere' and 'Outdoor IP Camera'. A navigation menu on the left includes 'Information', 'Network', 'Video', 'Schedule', 'Email/ftp Alarm', 'NAS Settings' (highlighted), 'Scheduling', and 'Admin'. The main content area is titled 'NAS Storage Settings' and contains the following options and input fields:

- Recording mode: Always Recording, Schedule Recording, Disable Recording
- Free disk threshold: If free disk less than GB
- Recording type: Circular recording, Stop recording
- Use NAS name: Use NAS name,
- Use NAS IP address: Use NAS IP address, . . .
- Shared folder name:
- NAS access account:
- NAS access password:
- Save & Apply button

Figure 3-11: NAS Setting page.

Model IP901 Weatherproof Day/Night Network IP Camera

3.9. Scheduling

The scheduling table allows you to set up a preset schedule to activate the Email/FTP Alarm or NAS storage settings in previous page.

1. Email/FTP Alarm: check to activate the schedule below.
2. NAS Recording: check to activate the NAS storage recording.
3. Week day or Every day : chose every week then select the specific week day(s) or chose every day then set up the time segment you wish to take effect.
4. Fixed time : You can also define a certain set day and set time.

Seeing the video from anywhere

Outdoor IP Camera

The website is based on open source software. Please contact the manufacturer for further information. All rights reserved. © 2009 H.264 Network IP Camera. Model: IP901

Schedule Management

<input type="checkbox"/> Email/ftp Alarm	Email/ftp schedule not enabled
<input type="checkbox"/> NAS Record	Nas schedule not enabled
<input type="radio"/> Every week	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat
<input type="radio"/> Every day	During time: 00:00 ~ 00:00
<input checked="" type="radio"/> Fixed time	Start time: 2009 / 02 / 17 17:00 End time: 2009 / 02 / 17 17:00

Add Schedule

3.10. Admin login

In this page, you can modify the web login account. With this account, you can login to the IP CAM and do any modifications. The default account is “admin” without password. If the login account is forgotten, you can reset the IP CAM to the factory default settings by following the steps in section 3.16 and login with the “admin” account.

Please be noticed that this account is different from the video play password in the “Video settings” page.

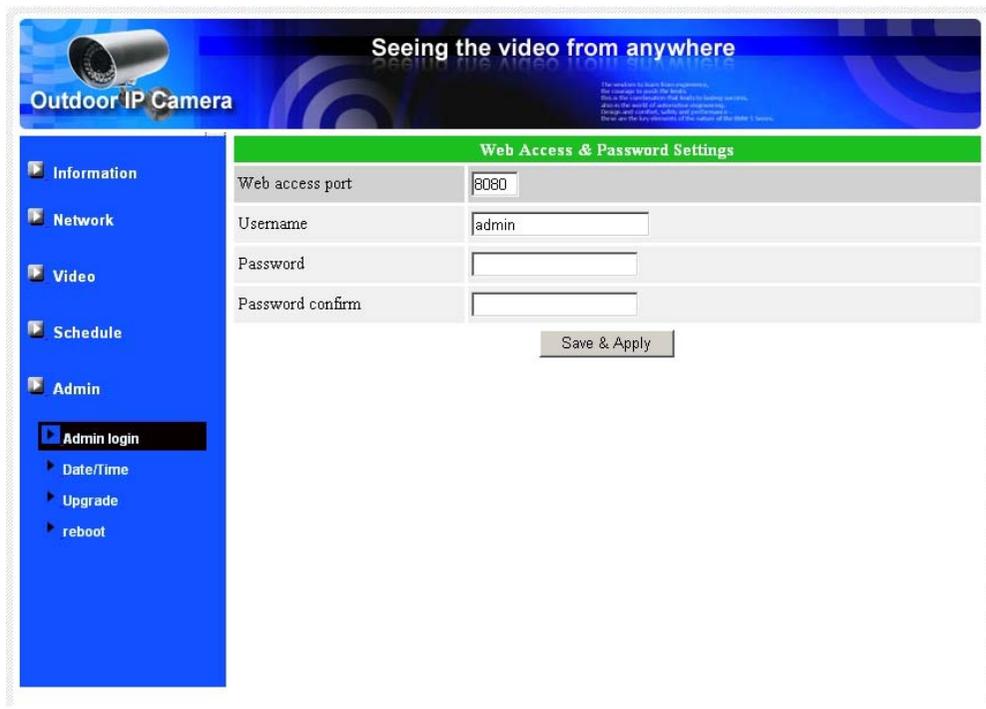


Figure 3-13: Admin login page

3.11. Date/Time

The IP CAM can synchronize the date/time with the universally available time server(for example time.windows.com) through NTP protocol. The date/time will then be corrected with the time server anytime when the Internet is connected.

Users can choose the different TimeZone of their areas to display the correct time. For some TimeZone areas, the “Daylight Saving Time” could be enabled or disabled. When the “Daylight Saving Time” is enabled, the system will automatically adjust the system time at the beginning and end of the daylight saving time every year.

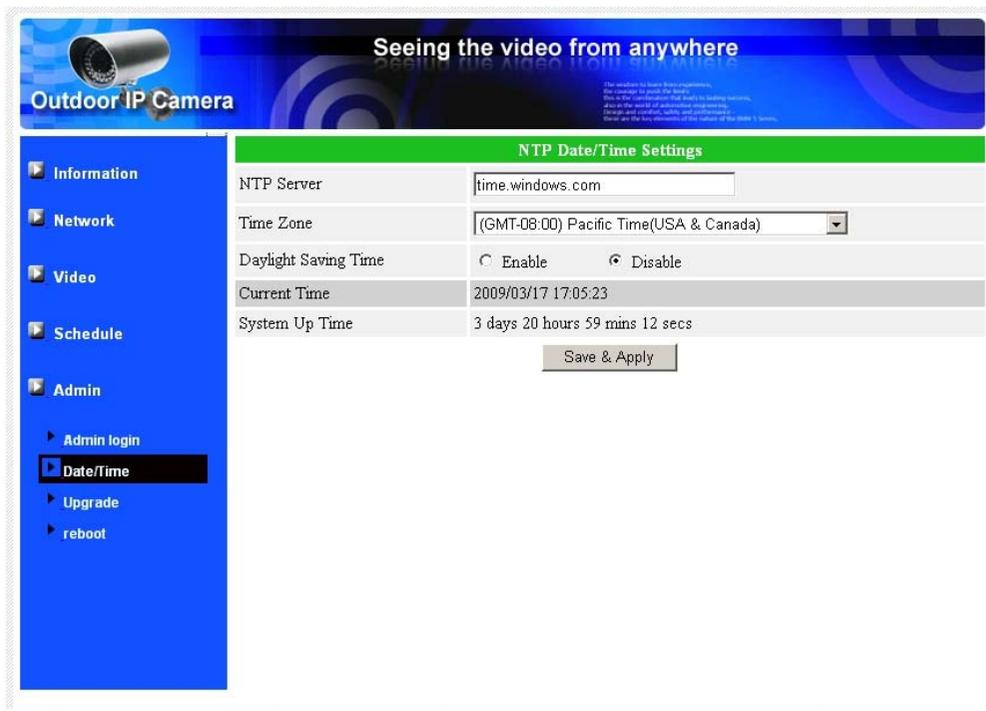


Figure 3-12: System date/time settings page

Model IP901 Weatherproof Day/Night Network IP Camera Upgrade

If there is some new firmware available from the supplier of this IP CAM, you can upgrade the firmware on this page. Please ask for the correct information about FTP server, username/password account and firmware filename from your supplier, and then do this upgrade. A status message about the percentage done in the upgrade procedure is displayed. Please be noticed that during the upgrade procedure, do not power off the IP CAM. After the upgrade procedure is finished, the system will restart automatically.

You can upgrade from the ftp server or from the local file in your computer.

During this upgrade procedure, do not try to modify other settings or view the video.

The screenshot shows the 'Firmware upgrade' settings page of an outdoor IP camera. The page features a blue header with a camera icon and the text 'Seeing the video from anywhere' and 'Outdoor IP Camera'. A left sidebar contains a menu with 'Upgrade' selected. The main content area is titled 'Firmware upgrade' and has two radio buttons: 'Upgrade from FTP server' (selected) and 'Upgrade from local file'. Below are input fields for 'FTP Server', 'Username', 'Password', 'Firmware filename', and 'Firmware location' (with a browse button). An 'Upgrade' button is at the bottom.

Figure 3-14: Firmware upgrade settings page

Model IP901 Weatherproof Day/Night Network IP Camera

3.12. Reboot

You can restart the IP CAM manually on this page. All the connected video viewing users will be disconnected.

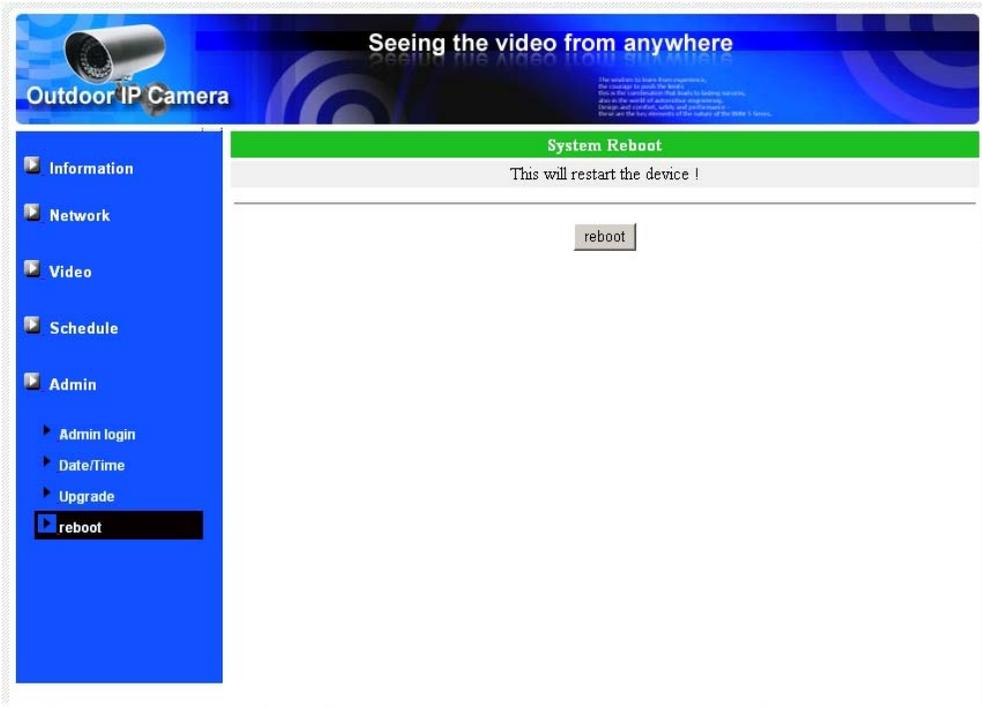


Figure 3-16: System reboot settings page

Model IP901 Weatherproof Day/Night Network IP Camera

3.13. Set to factory default

For some reason, for example you forgot the web login password, you may want to set the IP CAM to the factory default settings. The only thing you need to do is pressing the “reset” button on the cable for more than **4 seconds** and release it, do this when the IP CAM is powered on. The IP CAM will reset to the factory default settings and restart automatically.

The web login account will be “admin” (no password), the play-video password will be “ipcam” after reset to factory default.

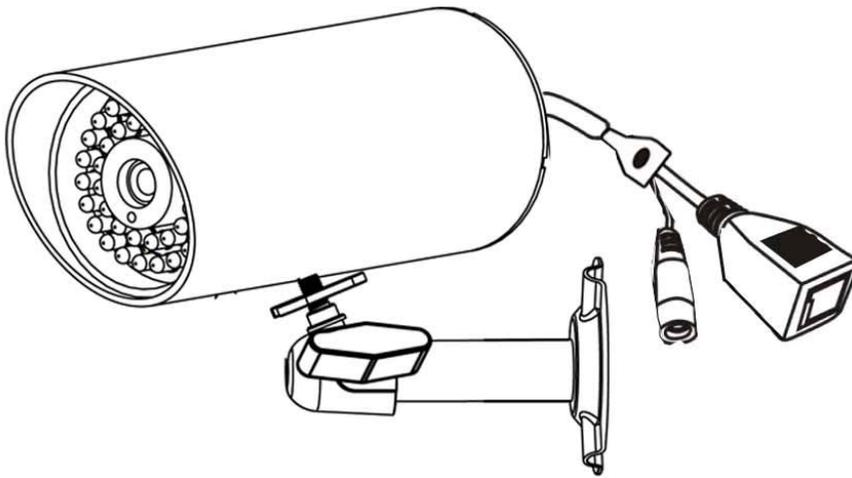


Figure 3-19: Press the reset button to set to the factory default

4. Features and specifications

4.1. Features

- Easily access the camera from anywhere in the world via the ID/password
- No complicated NAT/router settings needed.
- Free video management software - CamView program accompanied for easy access and multi-camera management.
- 3GPP/ISMA support.
- Dual video streaming with separate frame rate/resolution/bandwidth settings for PC and mobile.
- IR led control – support automatic, manual and scheduled modes. But only can see black & white video when IR led is on.
- Built-in Web server for managing via standard web browser.
- Supports enhanced MPEG-4 compression
- Supports resolution of up to 640x480 pixels, 30 frames per second.
- View video from your Wireless or wired Ethernet network
- Supports PPPoE protocol for direct ADSL connection.
- Motion Detection and E-mail/FTP notification, attach jpeg image file.
- Synchronize the time through NTP protocol.
- Connect up to 20 users simultaneously (please see appendix B).
- Online Firmware upgrade, will enter safe mode when power is off during critical firmware upgrade point.
- Watchdog function to prevent system failure.

Model IP901 Weatherproof Day/Night Network IP Camera

4.2. Specifications

Power	DC 12V, 1A
Processors	RISC CPU, hardware video processing and compression.
Network interface	Ethernet 10BaseT/100BaseTX, Auto-MDIX, RJ-45
Image sensor	RGB VGA 1/4 inch CMOS Automatic exposure control, automatic white balance, automatic gain control, automatic brightness control.
Light sensitivity	1~8 Lux 30 meters
Lens	3.6 mm, viewing angle: 56° / 41°.
Water resistant	IP46
IR LEDs	36 IR LEDs for up to 30 m distance night illumination.
Buttons	One reset button, to factory default settings
Video compression	MPEG-4 Part 2 (ISO/IEC 14496-2) with motion detection, profiles: Simple Profile, level 0-3
Resolutions	160x120, 320x240, 640x480
Frame rate	Up to 30 fps in all resolutions
Video streaming	MPEG-4 Separate frame rate/resolution/bandwidth settings for PC and mobile.
Image settings	Resolution: VGA(640x480), QVGA(320x240), QQVGA(160x120) Bandwidth : 64k, 128k, 256k, 512k, 768k, 1M, 1.2M, 1.5M bps Frame rate : 1~5, 10, 15, 20, 25, 30 fps
Security	Web management username/password protection Video display ID/password protection
Installation, management and maintenance	Installation tool on CD and Web-based configuration Automatic configuration backup and restore Video management software-CamView for video access and

Model IP901 Weatherproof Day/Night Network IP Camera

multi-camera management

Firmware upgrades via FTP

**Minimum Web
browsing and
management
software
requirements**

Built-in web server for standard web browser access

Pentium 4 CPU 1.0 GHz or higher, or equivalent AMD

1GB RAM

Supported protocols

IPv4, HTTP, TCP, ICMP, RTSP, RTP, UDP, IGMP, RTCP,
SMTP, SNTP, FTP, DHCP, UPnP, ARP, DNS, PPPoE, etc.

**Accessories
(included)**

Power adaptor, camera bracket, RJ45 ethernet cable, quick
installation guide, CD with installation tool/software and
ID/Password sticker, User's Manual.

**Video management
software**

Surveillance application for viewing and archiving up to 16
cameras

Users

Up to 20 simultaneous unicast users

(please see appendix B)

Unlimited users using multicast

**Alarm and event
management**

Events triggered by video motion detection

Notification/upload of JPEG images over FTP and/or email

**Dimensions (HxWxD)
and weight**

200x75x75mm 580g, exclude camera bracket, exclude
power adaptor

Approvals

CE, FCC Part 15 Subpart B Class B

Operating conditions -10 ~ +50 °C

Model IP901 Weatherproof Day/Night Network IP Camera

5. Package contents

Weatherproof Day/Night Network Camera x 1

12V Power Adapter x 1

Camera Bracket x 1

RJ45 Ethernet Cable x 1

Software Installation CD x 1

Appendix A. List of Tested NAT/router Devices

The followings are the list of tested NAT/router devices that can work with the IP CAM and CamView software when viewing in a remote location. You do not need to do any modification on the default settings of the NAT/routers. In some office environment, if some strict firewall function is enabled, it's possible that you can not view the IP CAM video through the firewall router. In this situation, please contact your MIS person to solve the problem.

Brand name	Model name
Asus	WL-550gE
Belkin	P5D7230-4
Buffalo	WHR-G54S
Buffalo	WHR-HP-G54
Corega	CG-WLBARGO
D-Link	DI-524
LanTech	WL54G-BR
Linksys	WRT54G
Netgear	WNR834B
PCi	BLW-HPMM
SMC	SMCWBR14-G2
ZyXEL	P-334WH

Table A-1: List of tested Wireless AP/router devices

Brand name	Model name
AboCom	CAS5047
ASUS	RX3041
Buffalo	BBR-4HG
Corega	CG-BARSD
DLink	DI-604
Edimax	BR-6104K
LanTech	HR-114Pro
Lemel	LM-IS6500

Model IP901 Weatherproof Day/Night Network IP Camera

PCi	BRL-04R
ZyXEL	Prestige-334

Table A-2: List of tested Wired NAT/router devices

Appendix B. Maximum Allowed Video Users

The maximum allowed video users for a single IP Cam at the same time is dependent on the video settings including “Internet speed” and resolution. The followings are the summary of the maximum allowed video users:

For video resolution of 160x120 pixels

Frame rate\bandwidth	64k ~ 512k	1M ~ 1.5M
5fps ~ 30 fps	20	4

For video resolution of 320x240 pixels

Frame rate\bandwidth	64k ~ 256k	512k	768k	1M ~ 1.5M
5fps ~ 30 fps	20	18	9	4

For video resolution of 640x480 pixels

Frame rate\bandwidth	512k	768k	1M ~ 1.5M
5fps ~ 30 fps	8	6	4

Appendix C. Performance Information

1. Video Performance Information

The video quality is dependent on the video parameter settings and the network quality. If you want to have a better video quality, you will usually set higher resolution and higher frame rate. This is fine when you are viewing the video locally in the same network. But when you want to see the video remotely through the Internet, you need to know the Internet speed (bandwidth) connected to your home network. If the “Internet speed” setting of your IP camera is very large, but your real Internet speed (bandwidth) is relatively low, the video quality could be very bad. In some worst case, the video display could be disconnected. In order to have the best video quality, you better have broadband service from your ISP and set the “Internet speed” of the IP camera a little lower than the real Internet speed provided by your ISP.

Also need to notice that when multiple users are displaying the videos from the same IP camera at the same time, the video bandwidth times number of users will be needed for the Internet speed.

Appendix D. Trouble shooting

1. Could I adjust the effective focus of the IP Cam?

A: The effective focus of the IP Cam is from 30cm to infinity, so, in almost all circumstances you can see the video clearly. There is no need to adjust the effective focus.

2. What's the viewing angle of the IP Cam?

A: The viewing angle of the IP Cam is about 56 degrees.

3. What's the longest distance using the IP Cam to see the video?

A: When using the IP Cam to see a long-distance object, whether it's clear or not depends on the size of the object. Usually when your eyes can see something clearly in that distance, the IP Cam can also see that object clearly in about the same distance.

4. What should I do if the password is forgotten, and the ID/password card is missing?

A: The easiest way to solve this problem is to reset the IP Cam to the factory default. Please press the reset button on the cable of the IP Cam for more than 4 seconds and release it. The IP Cam will then restart to the factory default. The default administrator account is "admin", administrator password is empty. The default video-play password is "ipcam". You can adjust these account and passwords by using the browser to login into the IP Cam and do the needed modifications.

5. I can see the video in a remote place, but the video quality is not good and sometimes the video will disconnect and then the video will reconnect again by itself.

A: It's probably because the internet bandwidth (internet speed) is not big enough. Please try to apply for a better internet connection from your Internet Service Provider or decrease the bandwidth settings of the IP Cam. You can adjust the bandwidth requirement of the IP Cam either from the CamView software or login into the web configuration page of the IP Cam to do the modification.

6. Does the IP Cam provide the recording function?

A: You can do the recording of the video of the IP Cam from the CamView software with the CamView software version later than the version number v1.1. Another software CamPlay is needed to play the recorded video files.

7. The video seems a little dark when the IP Cam is used inside the house, how could I improve this?

A: You can increase the "Low light sensitivity" in the "video settings" page either through web configuration or through CamView settings to "High" or "Very high". This will tremendously improve the video quality in dark environment. But please be noticed that when the IR led is turned on in the dark room, the video will be black and white only.

8. Can I connect the IP camera directly to my PC/notebook with an Ethernet cable?

A: If the IP camera is directly connected to your PC/notebook computer using an Ethernet cable, the IP camera will automatically use an IP address called "auto IP" with IP address

Model IP901 Weatherproof Day/Night Network IP Camera

169.254.xxx.xxx. If your PC/notebook computer is configured to DHCP, it will also use an "auto IP" address. But this will take about one minute after the IP camera is connected to the computer and you need to make sure that the WiFi interface on your PC/notebook computer is disabled. After about one minute, you can run the CamView software to access the IP camera, the CAM ID should be displayed on the "auto-search" list. You can then see the video by double clicking the CAM ID icon. But you need to know that in this situation, other local or remote computer can not see the video.

Appendix E. 3GPP/ISMA operation

3GPP/ISMA is using RTSP protocol for 3G mobile phone to display the video stream from network devices. This Network IP camera supports the RTSP protocol and video codec needed by 3GPP/ISMA. There are 3 preconditions to meet prior to mobile phone connection:

- A. Mobile phone must running under Windows Mobile 6.0
- B. The telecom service provider uses WCDMA as its 3G protocol;
- C. A static IP address network environment and network setting has been assigned to this static IP address.

By accessing the address `rtsp://ip_cam_address/CAM_ID.password` on the 3G mobile phone, users can pin the video of the IP camera and receive image. Where [ip_cam_address] is the static IP address of the IP camera. [CAM_ID] is the unique Camera ID of the specific IP camera. [Password] is the video play password of the specific IP camera (detailed in section 3.6). Different 3G mobile phone may need different operation to be able to key in the rtsp address, please contact the 3G mobile phone customer service for more details.

The video quality and resolution is the same value as set on the “video settings” page. Since the bandwidth provided by the 3G service is under 256k bps, better to configure the “Internet speed” of the IP camera to 128k or 64k bps.

For more information about operation on different 3G mobile phones, please contact us for detailed document.