User's Manual

Wireless IP Camera
Version 1.00
(English)

BEFORE GETTING STARTED

This UM is designed to aid you to get started with the device. If you experience problems following these guides or need further information pertaining to the device, please visit our website at www.prolink2u.com. All specifications are subject to the manufacturer's configuration at the time of shipping and mau change without prior notice, written or otherwise.

Table of Contents

1. Introduction

The **PROLiNK® PIC1007WP MegaPixel Dual Lens Wireless IP Camera** (will be referred to as "IP Camera for the entire document) is designed with the " user friendly" idea in mind. You can install the IP Camera easily on your home network and then access the IP Camera anywhere in the world from your mobile or pc with only a camera id and password. There are no user registration, no fixed IP address, no complicated DDNS setup or changing the router's settings. It is truly a Plug & Play experience.

At the heart of this IP Camera, lies not one but two Lens and two Sensors uniquely designed for day and night operation. One lens is specially tuned for day and the other for night, and this eliminates the need of a mechanical controlled IR-cut filter which is traditionally used by night vision camera. With this unique design , you no longer face mechanical failyres that affects night vision and video quality. It is also coupled with two high power IR LED with an effective range of 10m to provide a clearer visual even in total darkness.

Next, the IP Camera provides the best video quality in its class and excellent performance. Using the latest H.264 video compression technology, the IP camera offers High Definition 1280x800 resolution at 30 fps frame rate. In addition to the high performance, the IP Camera comes with built-in microphone and speaker that enables remote users to not only view but also allow 2-way communication for additional monitoring options.

For easy and flexible setup, the IP Camera provides both wireless IEEE 802.11 b/g/n and wired Ethernet network interfaces. It supports the WEP and WPA2 (Wi-Fi Protected Access) security modes to provide the best security for wireless networks. It also comes with built-in with WPS (WiFi Protected Setup) button for wuick and hassle free wireless connection setup.

Micro-SD card slot and NAS storage support is built right into the IP Camera to provide recording and playback with out the need of a dedicated NVR as with conventional cctv system Scheduling function is also available with advanced trigger detection to make sure all important events are recorded timely into Micro-SD card or NAS storage.

For intrusion prevention, the IP Camera provides advanced PIR/Motion/Sound/Temperature detection function. You can easily setup these functions and receive alerts via Push notification or Email/FTP with the snapshot images when events alerts are detected.

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

1.1. The Differences
TRUE Plug & Play. It's very easy to see the video of the IP Camera from anywhere in the world, you only need to key in the ID/Password of the IP Camera, and 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 mapping, fixed IP, DDNS, virtual server) of the NAT/router devices, just Plug&Play to use it.

2. Installation & Setup

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

1.2.   Hardware Overview
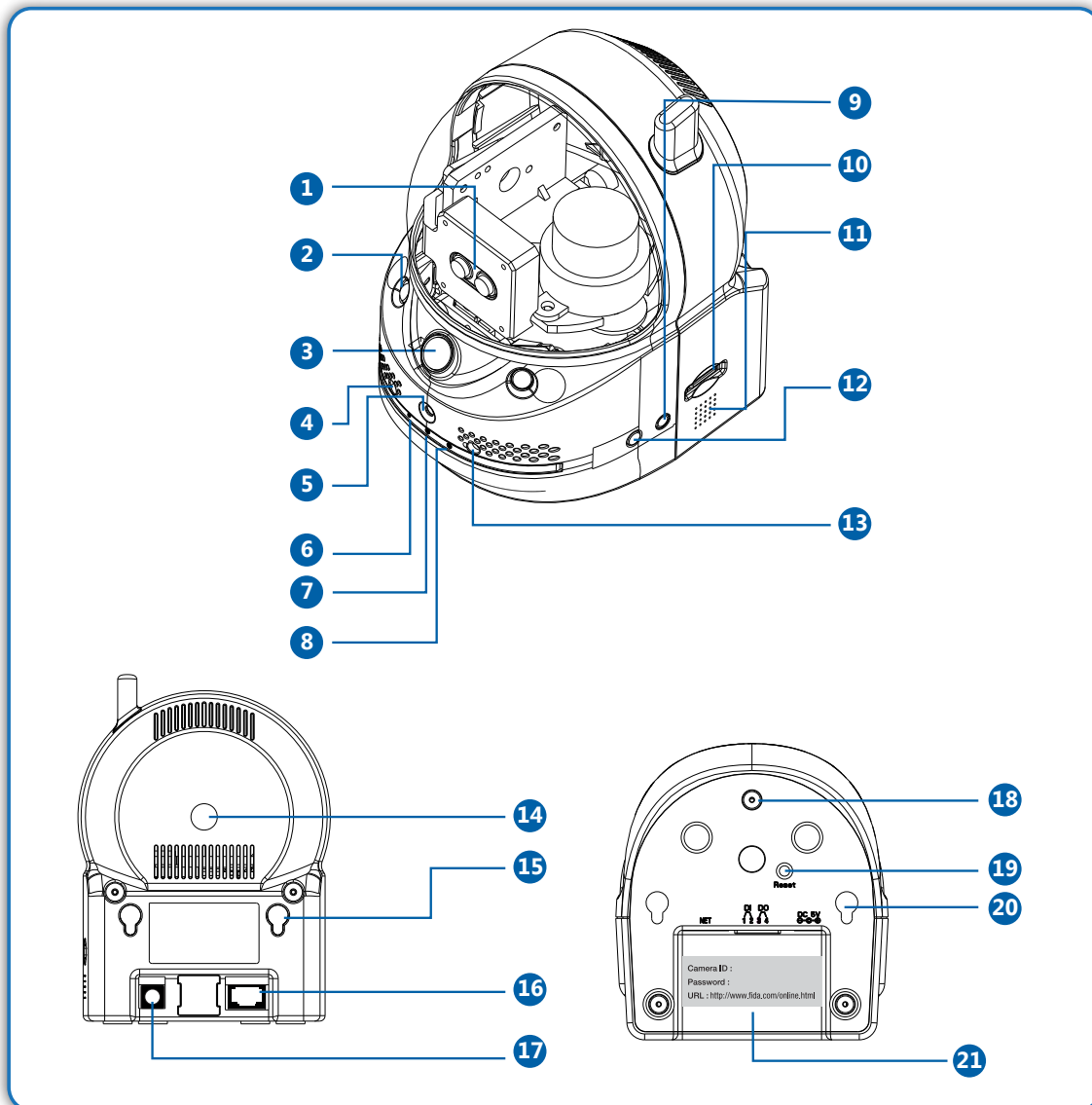
Figure 2-1: IP Camera Hardware Overview

1	Dual Lens	**9**	External Speaker Jack	**17**	Power Jack
2	IR LED	**10**	Micro-SD Card Slot	**18**	Bracket Screw Jack
3	PIR	**11**	Internal Speaker	**19**	Reset Button
4	Microphone	**12**	WPS Button	**20**	Wall Mount
5	Thermometer	**13**	Light Detector	**21**	Camera ID & Password
6	Ethernet Indicator LED	**14**	Bracket Screw Jack		
7	Internet Indicator LED	**15**	Wall Mount		
8	SD Card LED	**16**	Ethernet Jack		

1.3. Quick Installation and Usage

Setting up the IP Camera is as Easy as 1-2-3.

Step 1   Connect the IP Camera to your home/office network.

Step 2   Install the LiveView Software on your notebook/PC.

Step 3   Key in the Password of the IP Camera in the LiveView, and you are done.

1.3.1.   Step 1 : Connect the IP CAM to your home/office network

Please plug the power adapter to the IP Camera , and turn the power socket switch on. Connect one end of the Ethernet cable to the IP Camera and another end to the home or office network. Usually, this Ethernet cable is plugged into a home NAT/router device or an Ethernet switch if in the office (as shown in Figure 2-2). Since the default settings of the IP Camera use DHCP function and very often there is a DHCP server on most of the home/office network, the IP Camera should be connected to the Internet immediately. The Internet status LED should be red and constant to indicate it has a good connection status. If the LED is blinking, please refer to section 1.7~1.9 to try other network settings.
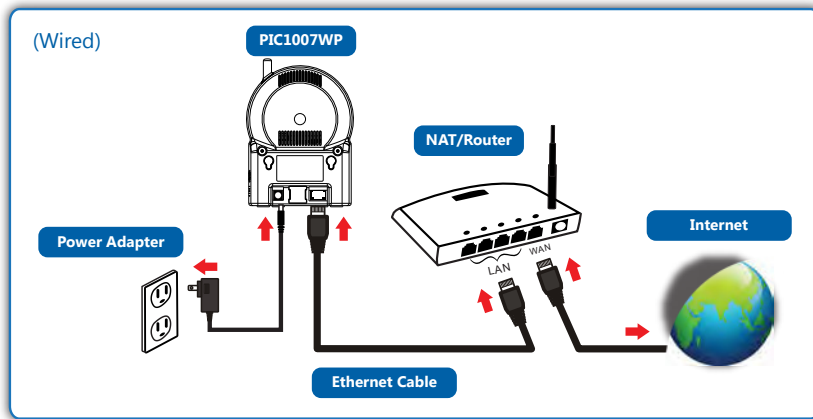
Figure 2-2: Connect Ethernet cable to a switch/router.

1.3.2.   Step 2 : Install the LiveView Software on your notebook/PC

Please insert the installation CD into the CD-ROM drive (for Windows OS platform only). The Setup CD will autorun and you should see the Main Menu immediately. Select Management Software and follow the instructions to complete the setup. When completed, LiveView and LivePlay icons will be created in the desktop area.

Figure 2-3 : Setup CD

Notice

1. Before installing LiveView on your notebook or PC, please make sure you have correctly installed the IP Camera. It is highly recommended to close other Windows applications to prevent any possible conflict in the installation process.

2. For LiveView Mac version, kindly download the software from our website at www.prolink2u.com. (Mac version is still in beta and some features may not function as intended.)

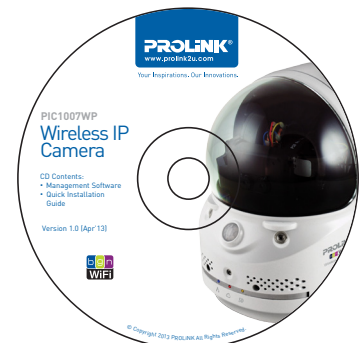### 1.3.3. Step 3 : Key Password in LiveView and Ready to View

If the computer and IP Camera are connected to the same network, the IP Camera ID will automatically be displayed in the "Auto Search" list . To see the video, just double click the IP Camera ID item in the "Auto Search" list. For example, if the IP Camera ID is 001001029, you can then double click the 001001029 item in the "Auto Search" list to view the video. When prompted for the IP Camera password, please key-in the password into this field and click " OK". The video will then be displayed on the window. Password can be retrieved from ID/Password card or label located at rear of the IP Camera as shown in Figure 2-4.

Camera ID :
Password :
URL : http://www.fida.com/online.html
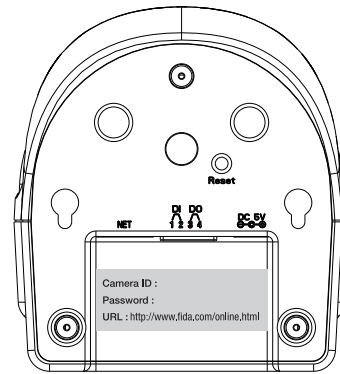
Figure 2-4 : Camera ID & Password

Notice

1. You can modify this play-video password in the web configuration page. Please refer to section 1.10 for more information.

1.3.4. Seeing the video from remote location

After the IP Camera is installed and you can see the video from the LiveView Software in the local network . It is also very easy to see the video from remote location. All you need to do is add a camera item in the "CameraList" folder of the LiveView Software; key in the IP Camera ID and Password (refer to your ID/Password card or label on the bottom of camera). 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 : LiveView Software User Interface

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

1.4. Wireless Connection

The IP Camera can also be connected to the home/office network through the 802.11 b/g/n wireless connection. The easiest way to setup the IP Camera to connect via wireless to your WiFi AP/router is to use the WPS button. If your WiFi AP/router is configured for WPS, just push the WPS button on both the IP Camera and router, and it will automatically insert the necessary WiFi settings into the camera.

If your WiFi AP/router does not support WPS, write down the WiFi security parameters used in this WiFi AP/router, including the SSID, security mode, encryption protocols and the "key" values. The supported WiFi security mode of the IP Camera is WEP (64 bits and 128 bits) and WPA(2)-PSK (TKIP and AES). In most of the home/office WiFi environment, this is quite enough.

Go to web configure page and select "WiFi Security". Set the WiFi settings on the IP Camera using the parameters from the AP/router (please refer to section 1.8 for more detailed description if needed). You can now test if the above WiFi settings are correct. Click the "WiFi test" and the testing result will be displayed in less than 60 seconds. If the test is not successful, please check the WiFi security parameters and test again.

If the WiFi test is successful, you can then enable the WiFi connection by unplugging the Ethernet cable from the IP Camera. The IP Camera will detect the Ethernet cable unplugged condition and start the WiFi connection. After the WiFi is connected, the IP Camera will connect to the Internet immediately.
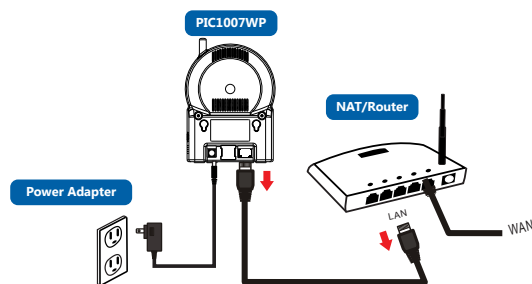
Figure 2-7: Unplug the Ethernet cable if WiFi test is successful.

Notice

1. Please remember that the WiFi connection will use a different IP address, you will need to do the "Auto Search" function in the LiveView to find the IP Camera again after the WiFi is connected.

2. If you want to switch back to the wired Ethernet connection, just plug in the Ethernet cable into the IP Camera again. You do not need to disable the WiFi function on the web pages.

3. Web Configurations

You can login to the web configuration page by directly key-in the IP address of the IP Camera or right-click the searched IP Camera in the "Auto Search" list of the LiveView Software and click the "Web Configure" to open the login window of the IP Camera.
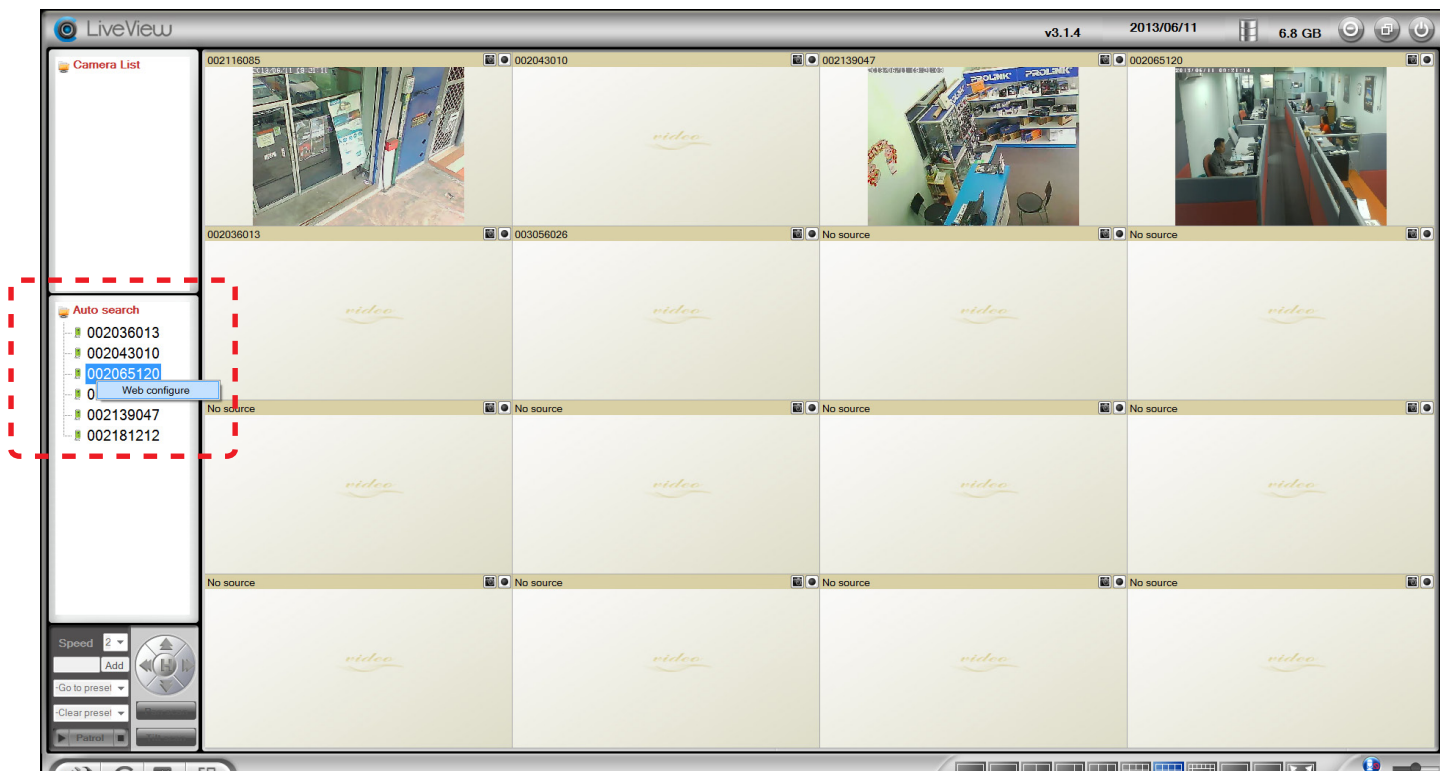

Figure 3-1: Open the web configuration page from LiveView Software

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

Figure 3-2: IP Camera Web configuration login page

1.5. *Information*

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

The IP Camera can only be viewed remotely by the LiveView Software when the IP Camera is connected. If this IP Camera is not connected, 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 Camera is running. The "Video users" field displays the number of connected video viewing users.

IP CAM Information	
Model	PIC1007WP / v030410
IP CAM ID	002-214-100
Registration status	Registered(3)
Network type	Wired(DHCP) - (ip=192.168.42.162)
Video user	0
Video resolution	1024 x 768
Video bandwidth	1.2 Mbps
Email/ftp Alarm	On
NAS Record	Not Recording
SD-Card Record	Not Recording
Mac Address(Hex)	00:1B:C7:01:D5:63

Figure 3-3: IP Camera Information page

1.6. Video Display

This display page allows you to view the video display and control the pan/tilt movement 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 1.10 for more details.
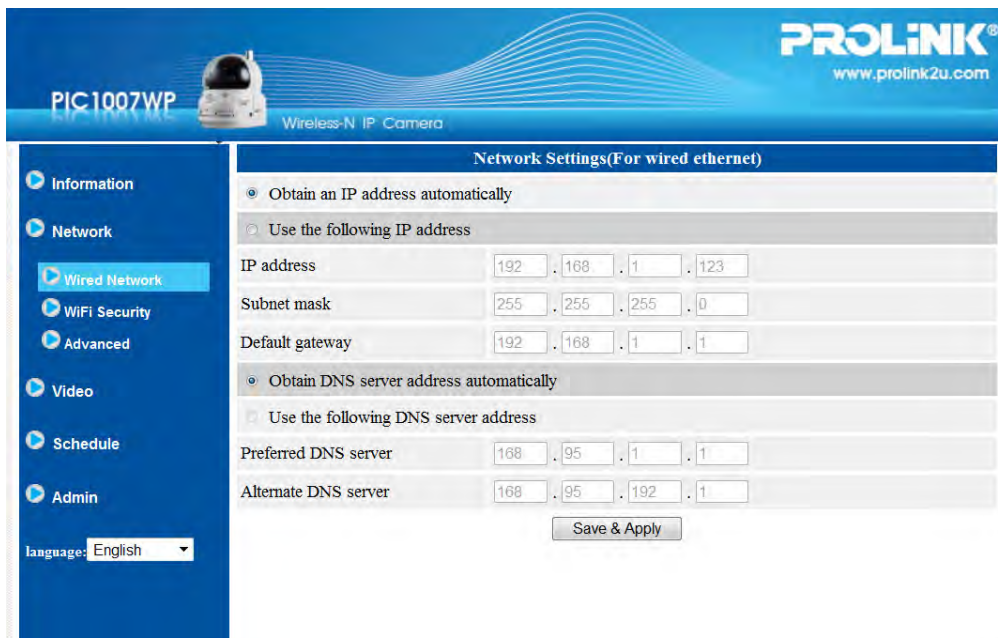

Figure 3-4: Video displaypage

Pan/tilt control:
1. Control by LiveView – this is to enable/disable the pan/tilt control function by LiveView software.
2. Speed – this is to control the pan/tilt moving step distance for each pan or tilt movement, fast means larger step movement.
3. Pan – click this button will let the IP Camera do one horizontal pan scan movement.
4. Tilt – click this button will let the IP Camera do one vertical tilt scan movement.
5. Patrol control – you can set up to 5 patrol points that will let the IP Camera to patrol through these patrol points. To set the patrol point, first move the IP Camera to the desired view position by clicking the different arrow buttons, and then press the "position" button of the specific patrol point. The (x,y) axis values will be updated accordingly. You can click the (x,y) axis of the patrol point to direct the view to this specific patrol point directly. After the patrol points are set, you can click the "Patrol" button to start the patrol through these points one time.
6. Stay xx secs – this is the time for each patrol point to stay before going to next patrol point.
7. Patrol – click this button to start the patrol movement of the IP Camera.
8. Stop – this will stop the patrol movement.

1.7. Network

The Network page allows you to modify the Wired Networking, WiFi Security and Advance Network settings.

The default settings use DHCP to obtain an IP address automatically. In most of the home and office network environment, there is a DHCP server running. In this situation, by using these default settings, the IP Camera can work immediately most of the time.
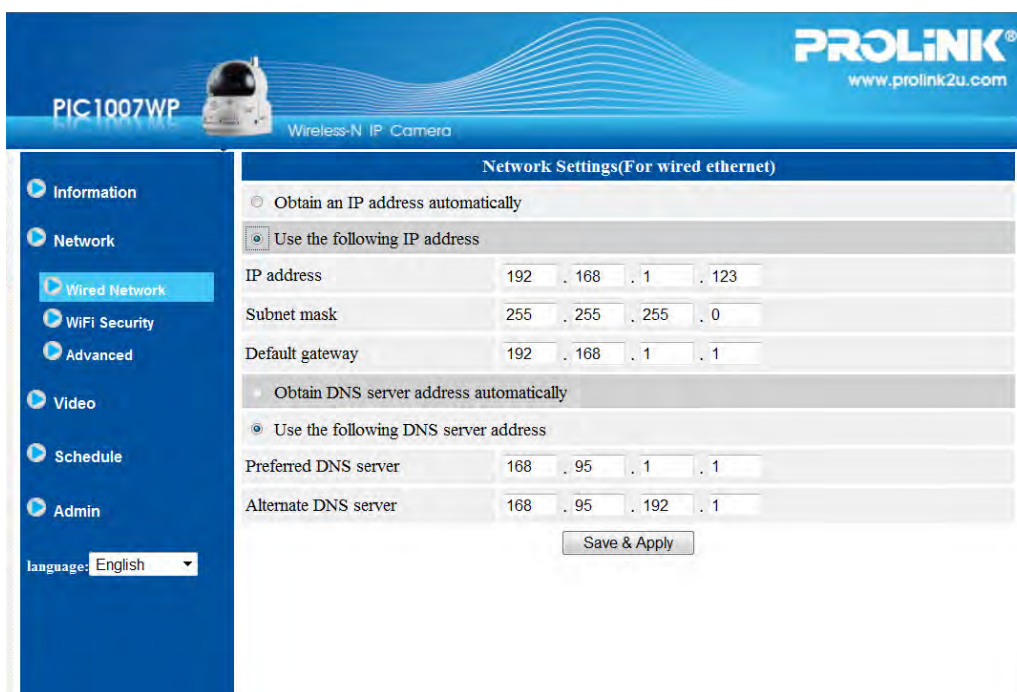
If the Ethernet cable is unplugged, the IP Camera will lose connection. But as soon as the Ethernet cable is plugged in again, the IP Camera will obtain a new IP address immediately.

Figure 3-5: Network settings page for DHCP function

If the network environment does not support DHCP function, you will need to set the network settings of the IP Camera 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 Camera cannot work. The default setting is "Obtain an IP address automatically".

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

1.8. WiFi Security

You can connect the IP Camera to the network via wireless. If your network environment has an 802.11 b/g/n router or AP running, you can check the "Enable WiFi function" button to use the wireless.

Figure 3-7: WiFi security disabled page

In order to use the wireless network, you need to fill the following fields:
1. SSID – this is the ID of the wireless router or AP of your wireless network environment, must be set correctly.
2. Security mode – this is the security mode used in the wireless router or AP. Choose one of the three modes – None, WEP and WPA-PSK.
3. WEP mode – when the WEP mode is chosen, you need also choose between 64-bit (5 char), 64-bit (10 hex), 128-bit (13 char) and 128-bit (26 hex) encryption mode, and then fill the WEP key correctly.
4. WPA-PSK mode - when the WPA-PSK mode is chosen, you need also choose between TKIP and AES encryption mode, and then fill the WPA-PSK key correctly. WPA2-PSK is also supported. But WPA Enterprise or WPA2 Enterprise is not supported.

All the fields in this page must be filled correctly with the same settings the wireless router or AP using.

Figure 3-8: WiFi security enabled page

1. Click the "WiFi test" button to check if the IP Camera can connect to the wireless network for these settings. You will need to unplug the Ethernet cable to enable the wireless connection after the "WiFi test" is successful.

2. Click the "WiFi scan" button to scan for all the available access points nearby.

3. If you want to define fixed IP address when using WiFi connection, please press the "IP address" button and key in your preferred IP address.

4. After you have modify any setting, click Save & Apply", do not need to restart the IP Camera to let the WiFi work, only need to unplug the Ethernet cable.

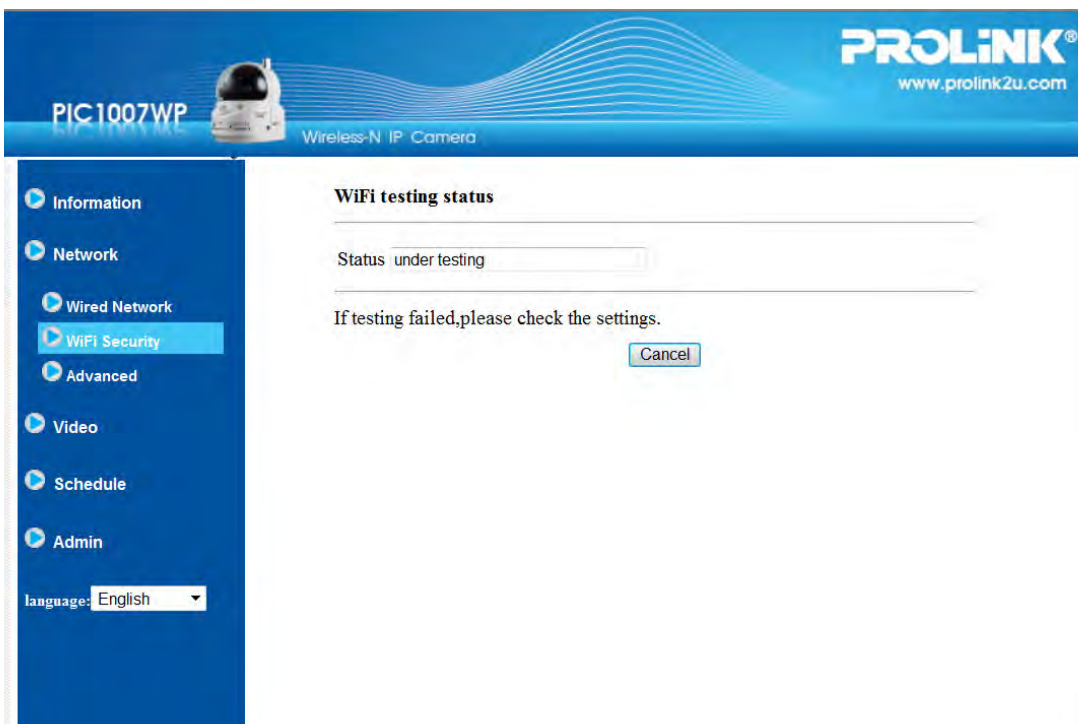5. The default setting is "Disable WiFi Function".

Figure 3-9: WiFi testing page

1.9. Advanced Network

In some special situation, your network environment only provides PPPoE connection (ADSL 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 Camera is registered using the PPPoE connection.

Please take note 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 Camera will use PPPoE to connect to the Internet.

The default setting is "Disable PPPoE".
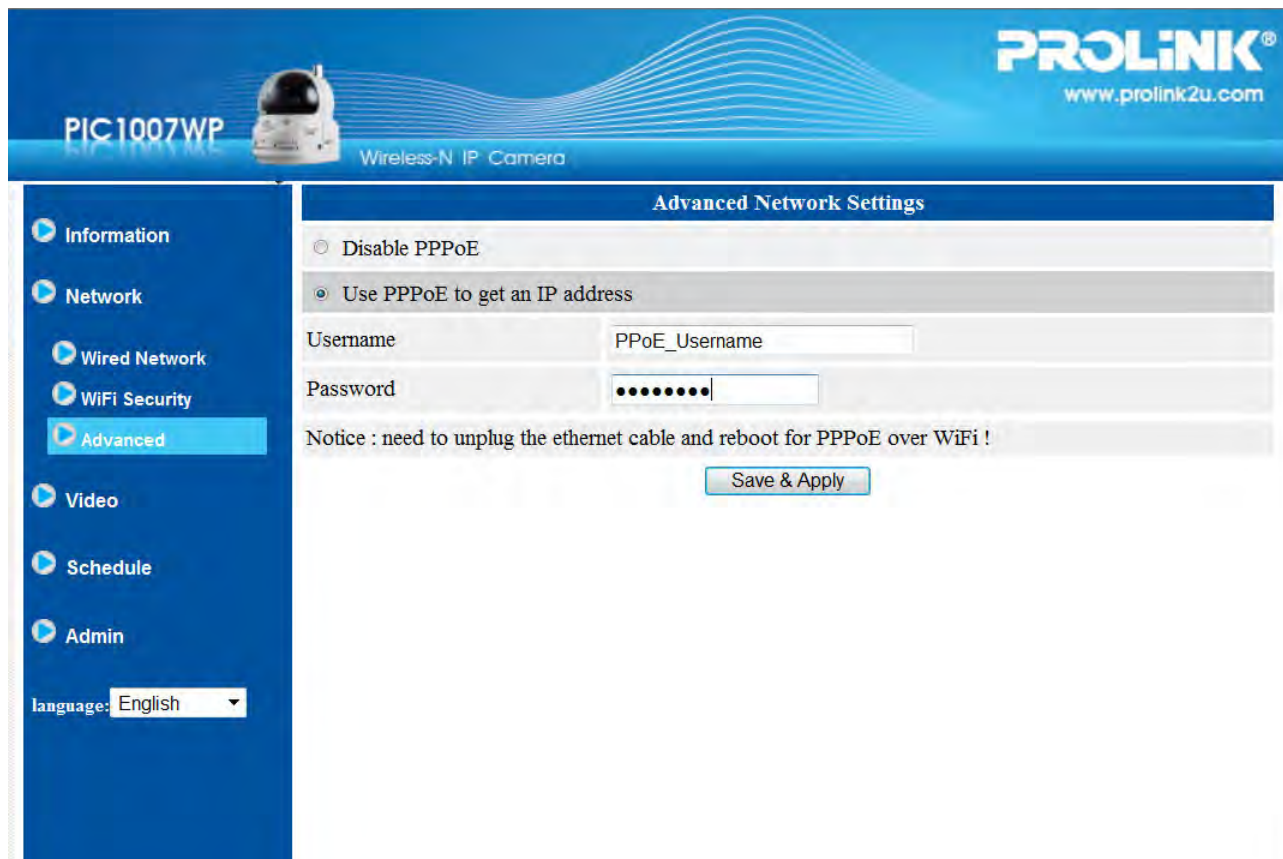
Figure 3-10: Advanced network settings page

1.10. Video Settings

The IP Camera is designed to provide high quality video for viewing from LiveView 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 IP Camera
Together with the IP Camera ID, you can view the video of this IP Camera 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 cannot provide more bandwidth than the specified value, the video quality could degrade. Set this value 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 – 320x240/640x480/1024x768/1280x800. If you decide to choose the value manually, you can choose one of the values. However, If the Internet speed is slow (low value), setting high resolution (1280x800) or frame rate could cause very bad video quality.

5. Frame rate – the video frame display rate. Higher value means faster movement and continuity in the video display.

6. Favor/Preference – Video Motion/Image Quality/Better Quality/Best 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, higher value means sharper video.

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. Video flip – can do "normal" or "flip" video display, this is needed if the IP Camera is hung on the ceiling or wall.

12. Outdoor/Indoor video/Indoor+Sunlight – for better video display quality, modify this setting. 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 display when the IP Camera is indoor. In this situation, change the setting to "Indoor video" will solve the problem. Please take note 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+Sunlight" choice.

13. Enable/disable audio microphone – you can enable or disable the audio microphone on the IP Camera. If disable, there will be no audio on the LiveView video viewing and recording.

14. 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 all modification is done, press "Save & Apply". All connected users will be disconnected to allow the changes to take effect.
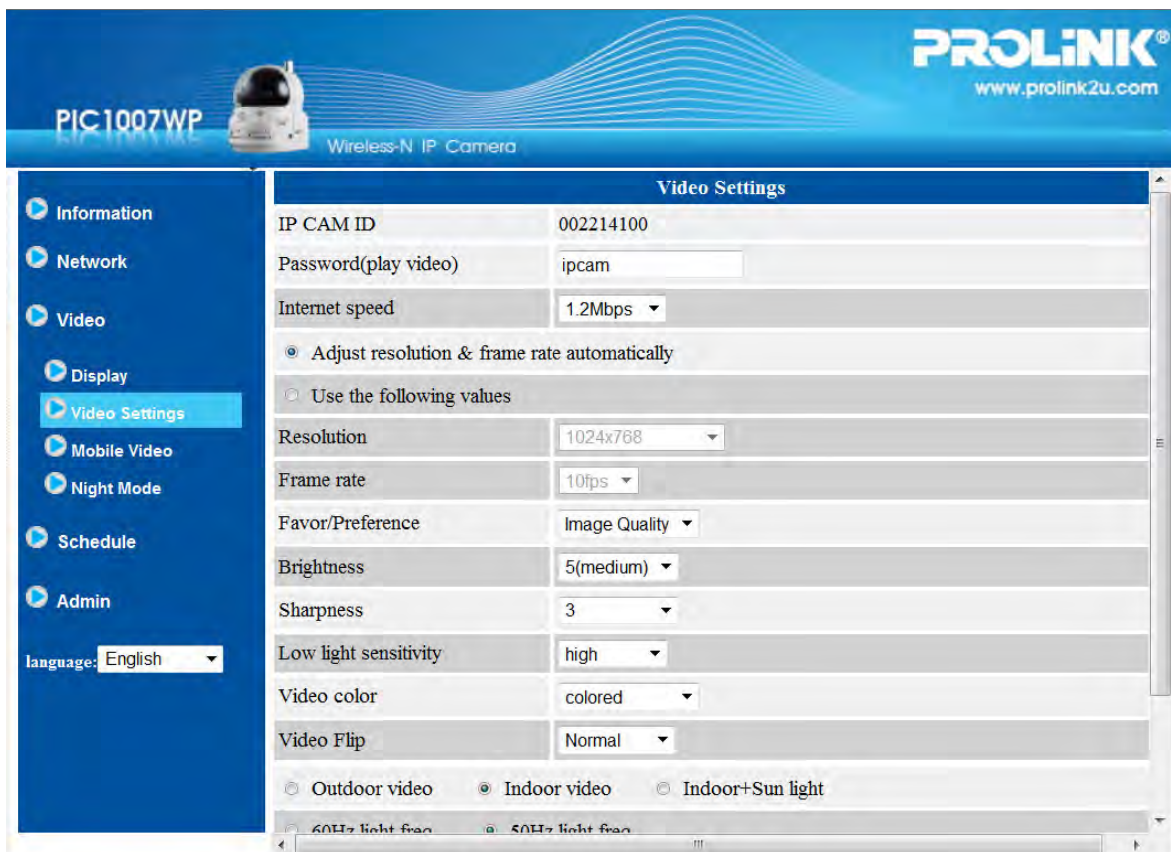

Figure 3-11: Video settings page

1.11.   Mobile Video Settings

The IP Camera can be viewed from a 3G mobile phone, please download "mLiveview"/"mLiveviewHD" software from App Store for iPhone/iPad and "mLiveview" from Android Market for Android Mobiles and Tablets. The video frame rate, resolution and bandwidth for 3G mobile access could be set independently from the normal video view. The maximum allowed resolution for mobile viewing is 1024x768.

1.12. Night Mode Control

The IP Camera is able to operate in day and night time. It has built-in IR LEDs that can allow the IP camera see the objects in the night time. This night mode control page is to control when the IR LEDs will be on. There are three ways to control the night mode (IR LEDs):

   a) Automatic day and night mode switch: the IP cam will automatically turn on the IR LEDs when night time or when the environment is becoming dark. There is a light sensor on the IP Camera that is doing this light detection.
   b) Scheduled time of night mode: the IP Camera can also be scheduled to turn on the IR LEDs in a time range of each day.
   c) Manual night mode control: the IP Cam can be manually forced to night mode(IR LEDs on) or day mode(IR LEDs off).
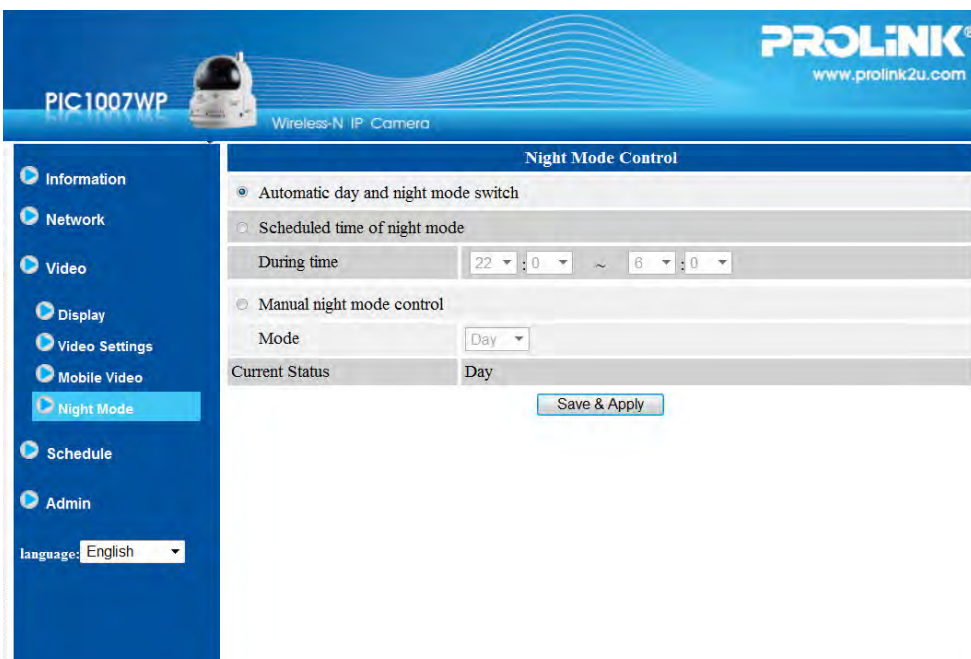

Figure 3-13: Night mode control page

1.13. Email/Ftp Alarm

The IP Camera provides the Email function that will send out an email with a jpeg picture attached when there is an event trigger. Alternatively, it can also send captured jpeg picture to a ftp server. You can enable or schedule the Email/ftp function in this page:

1. Email/FTP trigger – choose between "Motion", "Schedule" and "Disable"
    a) If "Motion" is selected, it means that when there is a motion detected, the system will send out the email and/or ftp with the captured video snapshot.
    b) If "PIR" is selected, it means that when there is a PIR alarm detected, the system will send out the email and/or ftp with the captured video snapshot. If the PIR alarm is constantly on, the IP Camera will keep sending out email/ftp message every second for up to 30 seconds.
    c) If "Schedule" is selected, it means that the email/ftp alarm detection and triggering will be scheduled by the "scheduling" in section 1.18.
    d) "Disable" will disable the email/ftp alarm.

2. Motion sensitivity – Range from 1 (high) ~ 5 (medium) ~ 10 (low).
    "High" means high sensitivity, i.e., the motion 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 Camera could be detected, but a moving car far away from the IP Camera could not be detected.
    "Low" means low sensitivity, i.e., the motion 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. "Medium" means 3% to trigger the detection.

3. Send email message – if this item is enabled, the IP Camera will send out an email message with the jpeg picture attached to the specified email account.

4. 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.

5. Send FTP message – if this item is enabled, the IP Camera will send out a jpeg picture file to the specified ftp account.

6. FTP server – this is the FTP server address to receive the jpeg file.

7. 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.

8. 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".

Figure 3-14: Email/FTP Alarm page

For the email message to work, a SMTP server is required. Click the "advanced" button will display the SMTP server settings page. A default SMTP server is provided, however so you could also specify your own SMTP server if required.

1. SMTP server – this is the IP address and port of the SMTP server that will provide the send email service. This server is irrelevant to the "Email recipient" address.

2. SMTP username/password – this is required to allow permission to access the SMTP server. Leave the username and password fields empty if no authentication is required for the SMTP server.

3. SMTP server test – Press "SMTP server test" to check if all the settings are correct.

Figure 3-15: SMTP server settings page

1.14. Speaker Alarm Settings

The IP Camera provides Speaker Alarm function that act like a conventional alarm siren. Any PIR or motion detection could trigger the speaker alarm.

1 1. Speaker alarm trigger– select the trigger mode of the speaker alarm
   a. A. Motion trigger – if this is selected, the speaker alarm signal will be active when video motion is detected. The detection sensitivity is set In the "motion detection" page.
   b. B. PIR trigger – if this is selected, the speaker alarm will work when the PIR sensor is detected..
   c. C. Schedule – if this is selected, the speaker alarm is scheduled according to the settings of scheduling in section 1.18.
   d. D. Disable–disable the speaker alarm.

2 2. Alarm loop times – this is the duration the speaker alarm will be active during alert.
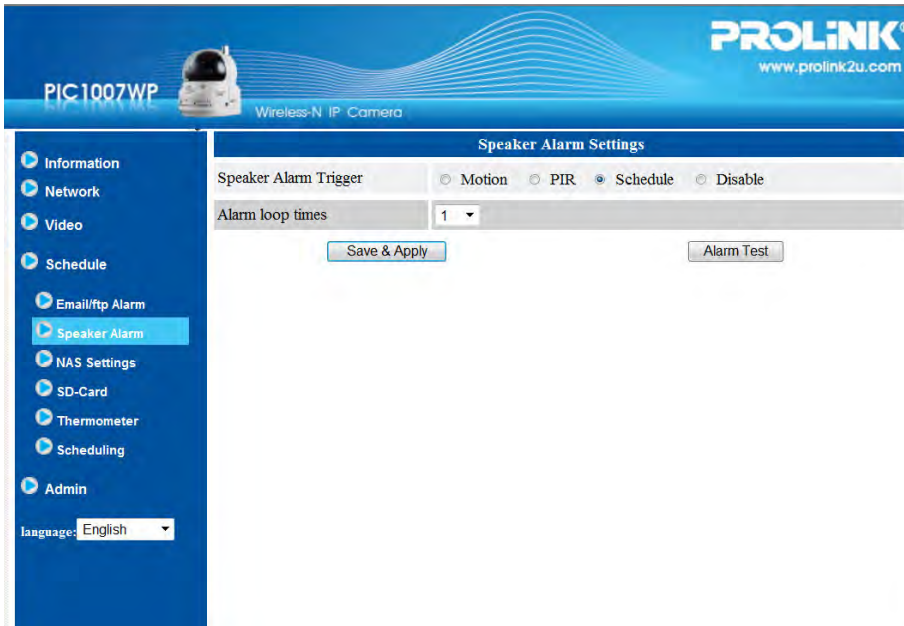

Figure 3-16: Speaker Alarm setting page

1.15. NAS Settings

The IP Camera provides recording of video files into a standard NAS (Network Access Storage) device. The IP Camera connects to NAS device using the standard LMX_NS/CIFS/SSN protocols which are the same as the Microsoft Windows network neighborhood protocols. This allows the posibility to record video files to all standard NAS devices in the market. Since there are a lot of different choices, including price and scale, user can decide which is best for their needs. By using this function, a standard NAS device will become a NVR (Network Video Recorder) device.

__Notice__
When the IP Camera is doing NAS recording, this is counted as one video user. Please refer to appendix B for maximum simultaneous users.

1. If the "Always Recording" is selected, the system will start to record continuously to the NAS storage device. If the "Schedule Recording" is selected, the IP Camera will record according to the schedule set in section 1.18. "Disable Recording" will disable this NAS recording.
2. When the NAS is recording, the system will check the free disk space available. If the free disk space is less than the specified number, the system will do "Circular recording" (overwrite the oldest recorded files in the NAS device) or "Stop recording" depending on the option selected.. If the "keep recorded video for xx days" is selected, the system will do circular recording and over write the recorded video files older than xx days ago.
3. The IP Camera can connect to the NAS device by using the "NAS name" or "NAS IP address". If the NAS device and the IP Camera are in the same local area network, the IP Camera can automatically locate and connect to the NAS device by the "NAS name". If the NAS device uses a fixed IP address (either in the local area network or in the public internet), the IP Camera can connect to it by the "NAS IP address".
4. The "Shared folder name" is the folder in the NAS device that will record the video files of the IP Camera.

5. The "NAS access account" and "NAS access password" are the username and password to login into the specified "Shared folder name" of the NAS device.
6. NAS Scan – use this to scan for some specific NAS devices in the same network. Not all the NAS devices are supported for this scan function.
7. NAS Info – display the NAS storage capacity and available disk space.
8. Configure NAS (web) – click this to connect to the web configuration page of the NAS device. Need to key in the login username/password of the NAS device.
9. Access NAS files – on the Microsoft Windows platform, click this to access the files on the NAS devices.

In the Microsoft Windows environment, you can access to the NAS device by keying the URL address \\"NAS name"\"shared folder name" or \\"NAS IP address"\"shared folder name" in the windows Internet Explorer, and then key in the "NAS access account" and "NAS access password" to the prompted login window. The video files are recorded under the subfolder IPCamRecordFiles/Recording/ID-ID, where ID is the ID of this IP Camera. All the recorded files are with the name of hhmmss.crf format, where hh is the hour, mm is the minute, ss is the second of the starting time of the recording video. The files are segmented every five minutes. Users can use the free bundled LivePlay software to play back the video files.
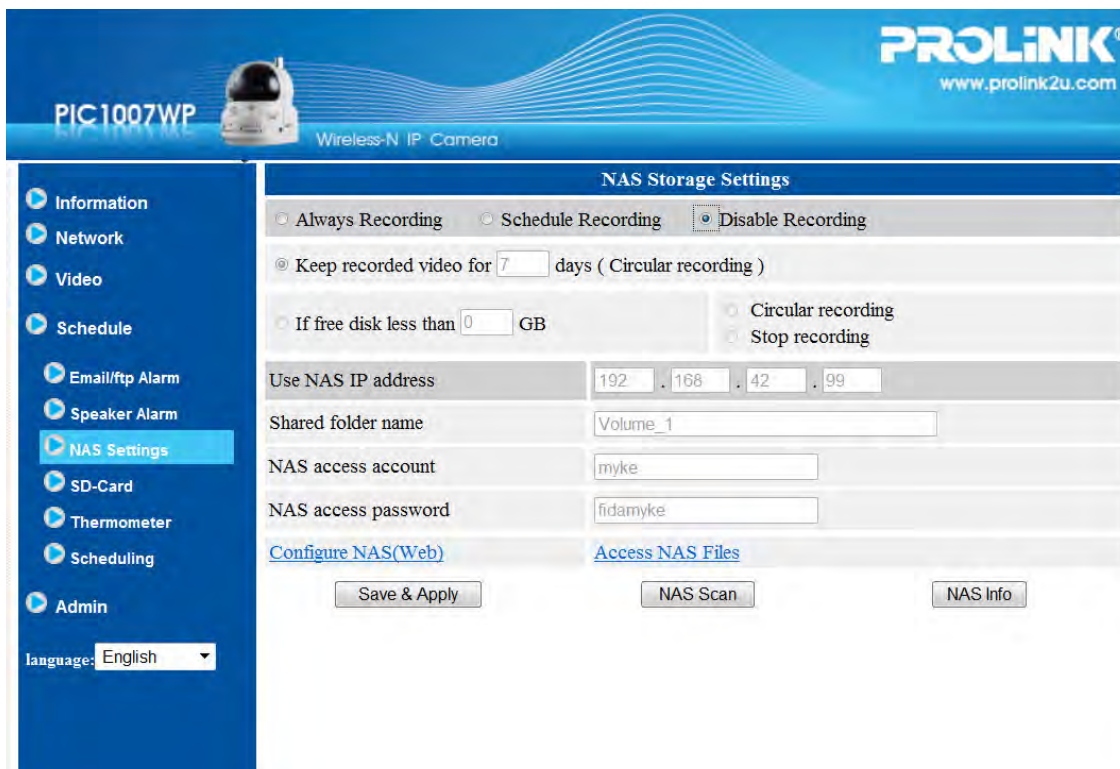

Figure 3-17: NAS Storage Settings page

1.16. SD-Card Settings

The IP Camera provides recording of video files into a standard Micro SD-Card. Since this recording is directly to the SD-Card, there is no network packets loss problem when recording to remote device through internet.

Notice

When the IP Camera is doing SD-Card recording, this is counted as one video user. Please refer to appendix B for maximum simultaneous users.

1. If the "Always Recording" is selected, the system will start to record continuosly to the Micro-SD card. If the "Schedule Recording" is selected, the system will record to Micro-SD card according to schedule set in section 1.18. "Disable Recording" will disable this Micro-SD card recording.
2. When Micro-SD card is recording, the system will check the free disk space available. If the disk space is full (no free disk space), the system will do "Circular recording" (overwrite the oldest recorded files in the Micro-SD card) or "Stop recording" depending on the selected option.
3. Micro-SD card status – diplay Micro-SD card status whe it is inserted or removed.
4. Micro-SD card files – as shown in fig.3-17, all the recorded video files with information including file name and recorded time are listed in this page under the directory of each date. The recorded file could be separately downloaded or deleted on this page.
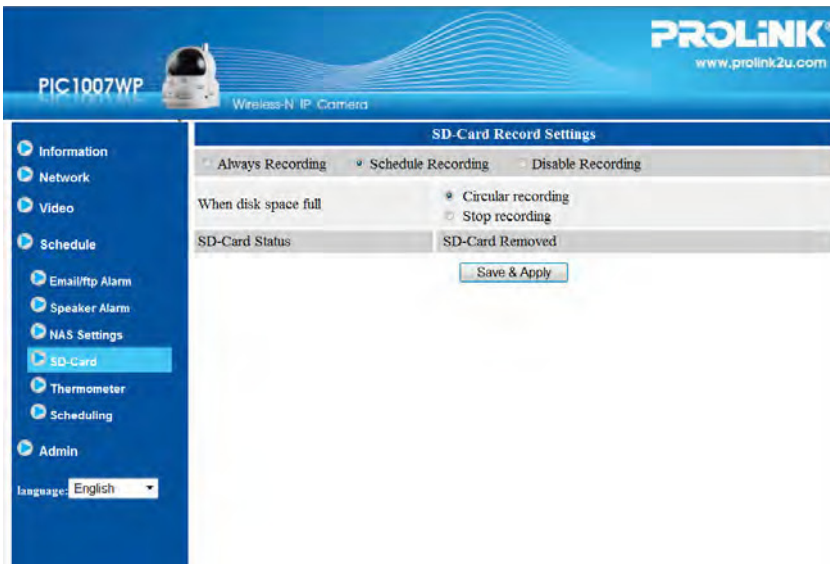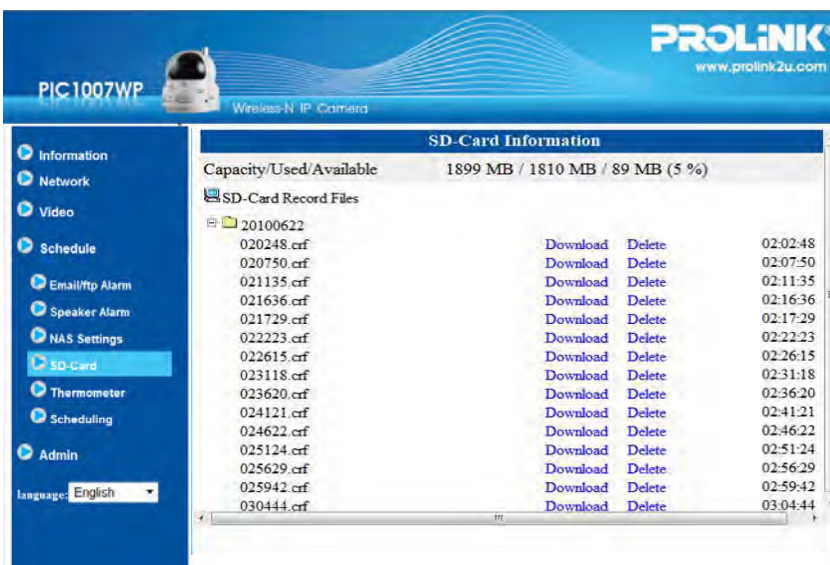

Figure 3-16: SD-Card Settings page

Figure 3-17: SD-Card information page

1.17. Infrared thermometer

There is a built-in Infrared Thermometer on the camera, it will display the current temperature of the surveillance area on the video display screen.

You can set a specific temperature range for the thermometer to trigger in schedule event. When the temperature is out of range, it can trigger alerts like email/ftp, speaker alarm or start recording to NAS and SD card
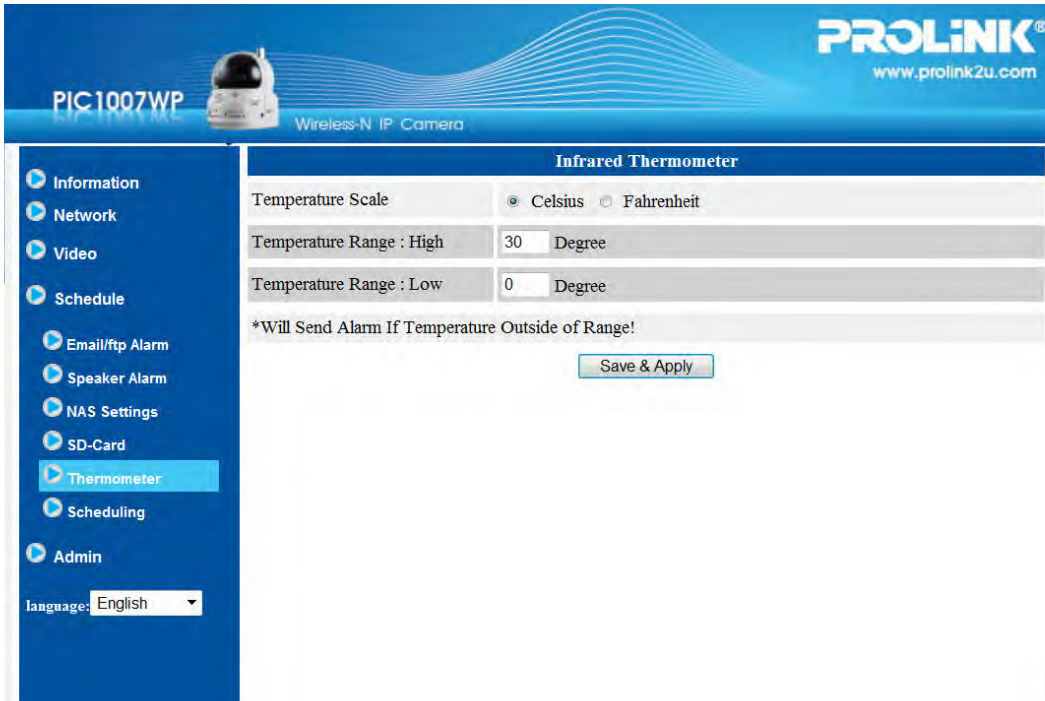

Figure 3-18: Infrared Thermometer settings page

1.18. Scheduling

The IP Camera provides scheduling function that triggers event actions such as E mail/Ftp sending, NAS/Micro-SD recording or speaker alarm. Total of 12 schedules can be added with combination of event actions. Before any schedule can be added, the "Schedule" option must enabled in the event actions settings. . There is no conflict check for the scheduling, it means that the scheduling time could be overlapped, and the IP Camera will do all the scheduled events during the overlapped time period.

1. Schedule list – all the schedules are listed in this area. Each listed item can be modified or deleted by pressing the "Edit" or "Delete" button.
2. Email/ftp Alarm – selecting this will enable the email/ftp sending in the scheduled time period when event alerts are triggered. The event trigger options are Motion, PIR and Temperature.
3. Speaker Alarm – selecting this will enable the built-in or external speaker to output an alarm siren sound in the scheduled time period when event alerts are triggered. The event trigger options are Motion, PIR and Temperature.
4. NAS Record – selecting this will enable NAS recording in the scheduled time period when event alerts are triggered. The event trigger options for this feature are Continuous, Motion, PIR and Temperature. In "Continuous"option the IP Camera will record video to the NAS device during the whole scheduled period. For "Motion triggered" or "PIR triggered" or "Temperature", the IP Camera will record video to the NAS device for 30 seconds during the scheduled period each time when any event trigger is detected.
5. SD-Card Record – selecting this will enable SD-Card recording in the scheduled time period when event alerts are triggered. The event trigger options are Continuous, Motion, PIR or Temperature. In "Continuous" option, the IP Camera will record video to the SD-Card during the whole scheduled period. For "Motion triggered", "PIR triggered" or "Temperature", the IP Camera will record video to the SD-Card for 30 seconds during the scheduled period each time when any event trigger is detected.

6. For the scheduling period, you can choose between "Every week", "Every day" or "Fixed time" :
   a) For "Every week", choose week days of the week and set the time duration of each day.
   b) For "Every day", set the time duration of every day for the scheduling.
   c) For "Fixed time", set the starting date/time and the end date/time of the scheduling period
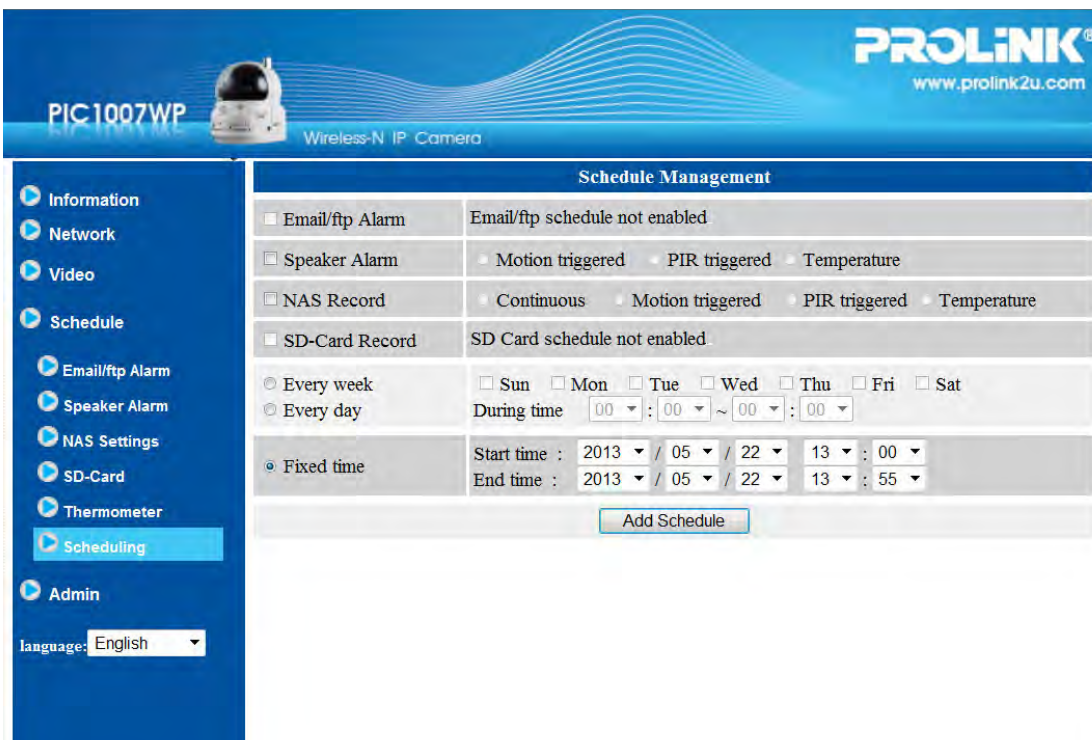

Figure 3-18: Schedule management page

1.19. LED Control

The IP Camera provides the Led Display Control function, you can enable or disable the led display/indication on the front panel of the IP Camera device. The related settings are explained below:

1. Normal led display – select this to display all the LED Indicators on front panel.
2. Turn off led display always – select this to disable display of all the LED Indicators.
3. Turn off led display after network connected – select this will display the LED Indicators when the Internet connection has some problem, the LED Indicators will turn off when the Internet connection is successful.
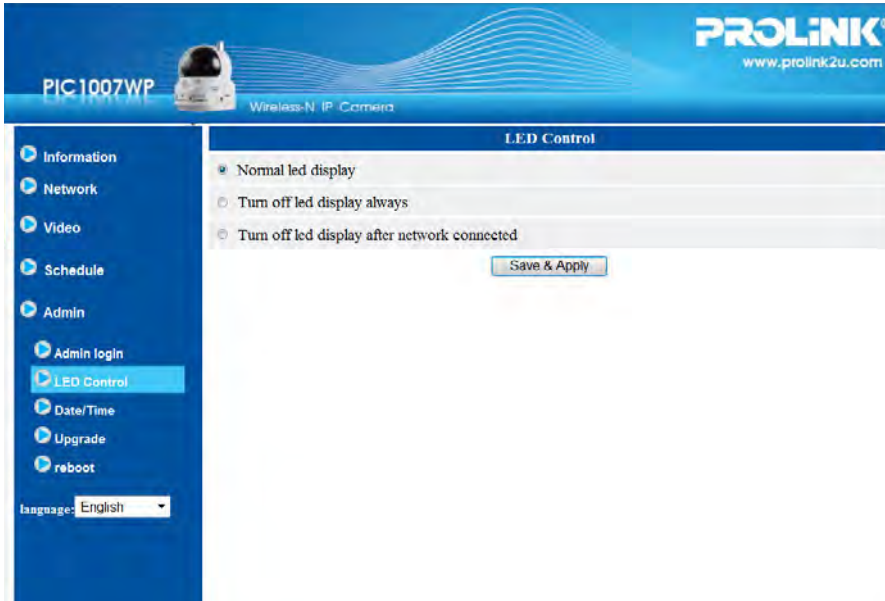

Figure 3-19: Schedule management page

1.20. Date/Time

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

User can choose their area Time Zone to display the correct time. Certain Time Zone areas can enable or disable the "Daylight Saving Time". When the "Daylight Saving Time" is enabled, the start and stop time of the Daylight Saving Time could be edited.

Figure 3-20: System date/time settings page

1.21. Admin

In this page, you can edit the web login account. This account allows you to login to the IP Camera settings and make changes to it. The default username is "admin" and password is empty. If the login account is forgotten, you can easily reset the IP Camera to the factory default settings by following the steps in section 1.25 and login with the "admin" account.

Note: This account username and password is different from the video play password in the "Video settings".

Figure 3-21: Admin settings page

1.22. Upgrade

If there is new firmware available for this IP Camera, you can upgrade the firmware from 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. When you start the upgrade process, the page will show the upgrade status. During the upgrade process, do not power off the IP Camera, otherwise the IP Camera will enter into the safe mode (section 1.24). After the upgrade is done, the system will restart automatically.
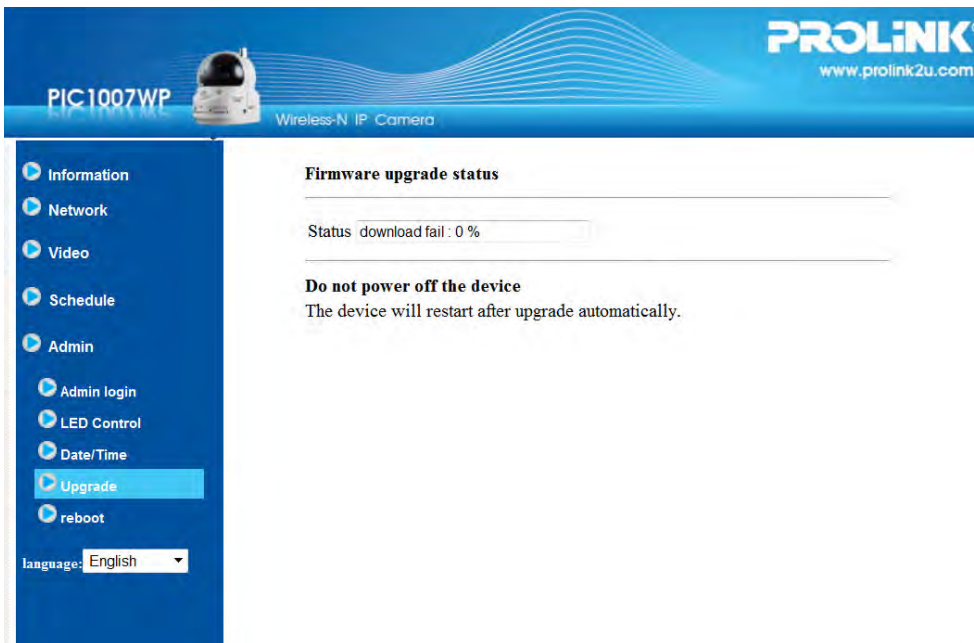
You can upgrade from the ftp server or from the local file in your computer.

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

Figure 3-22: Firmware upgrade settings page

Figure 3-23: Firmware upgrade status page

1.23. Reboot

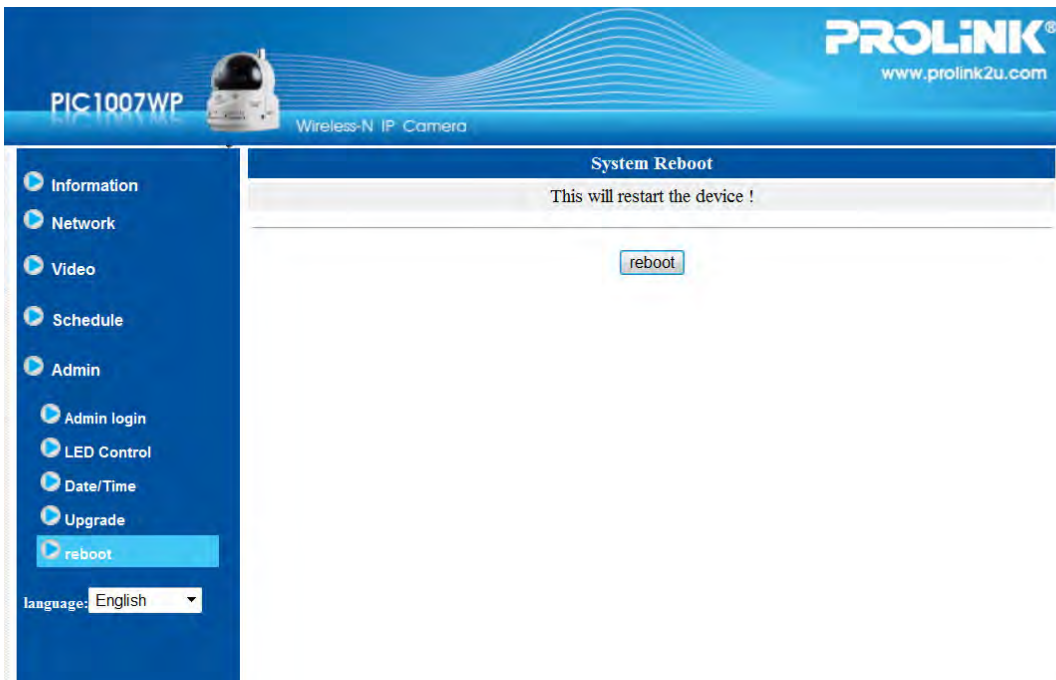You can restart the IP Camera manually in this page. All the connected video viewing users will be disconected.

Figure 3-24: System reboot settings page
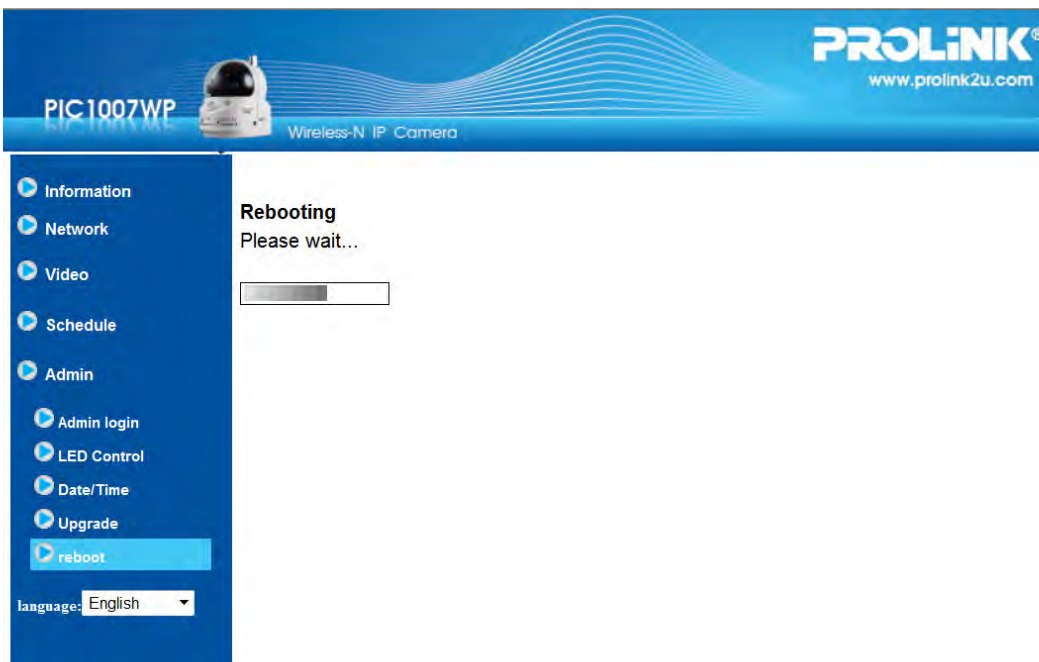
Figure 3-25: System reboot under-going page

1.24. Safe Mode

If by some abnormal operation, for example, power off during the upgrade procedure, the IP Camera will enter into safe mode. You will see the following "Safe mode" page when login to this IP Camera. Please do the upgrade operation immediately to recover the system. In safe mode, the IP Camera cannot display the video on the LiveView Software, but you can still find this IP Camera in the "Auto search" list.

The steps to recover from "safe mode" are the followings:
1. Use LiveView to locate the IP Camera by clicking the "Auto Search" item on the LiveView Software.
2. Login to the web configuration page of the IP Camera.
3. Upgrade the firmware from the "Upgrade" page.
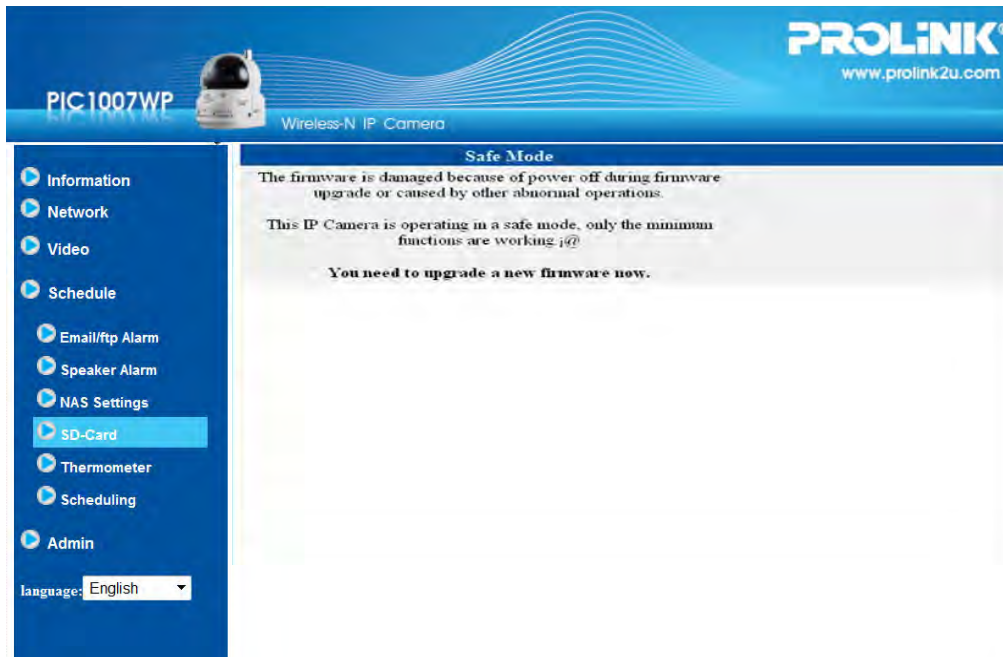
Figure 3-26: Safe mode information page

1.25. Reset To Factory Default

For some reason, for example you forgot the web login password, you may want to reset the IP Camera to factory default setting. Use a paper clip to press and hold the "reset" button on the back of the IP Camera body for more than 3 seconds and release it. Do this while the IP Camera is powered on. The IP Camera will reset to the factory default settings and restart automatically.

The default web login account will be "admin" (no password) and the play-video password will be the same as printed on the label at the bottom of the IP Camera.
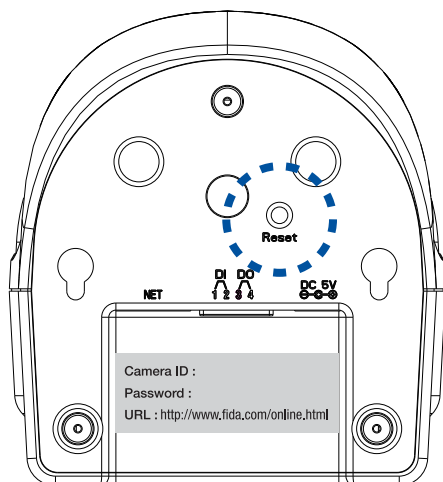
Figure 3-27: Stick on the reset button to set to the factory default

4. Features & Specifications

1.26. Features

- True Plug & Play. Only ID/Password is required. No IP address or DDNS settings.
- H.264 latest video compression technology.
- Megapixel resolution of up to 1280x800 pixels at 30 fps.
- Unique Dual Lens and Dual Sensor for day/night operation.
- Pan/Tilt Control.
- PIR body detection, effective distance ~ 7 meters.
- Two way audio with built-in mic & speaker and speaker-out jack (external speaker is required).
- Infrared Thermometer and Temperature alarm control .
- Micro-SD card (up to 64GB) video recording with 5 secs pre-recording.
- Built-in support NAS storage recording.
- 802.11 b/g/n wireless with WEP and WPA/WPA2 security support.
- WPS button for easy WiFi setup.
- IR LED control – support automatic, manual and scheduled modes .
- Free Video Management Software for easy access and multi -camera management.
- Connect up to 20 users simultaneously .
- Push Notification on iOS and Adnroid platform for PIR, Motion, Sound and Temperature alert.
- Email/Ftp alarm message for PIR, Motion and Temperature alert.
- Synchronize the system time through NTP protocol.
- Built-in Web server for managing via standard web browser.
- Event scheduling.
- Online Firmware upgrade with Safe Mode protection.
- Watchdog function to prevent system failure .

1.27. Specification

Item	Descriptions
Power	DC 12V, 1A
Processors	RISC CPU, hardware video processing and compression.
Network interface	Ethernet 10BaseT/100BaseTX, Auto-MDIX, RJ-45

Wireless interface	IEEE 802.11n 90 - 150 Mbps
	IEEE 802.11g 6 - 54 Mbps
	IEEE 802.11b 1 - 11 Mbps
	Transmit power: 14.5dBm typically @ 802.11g
	                         17.5dBm typically @ 802.11b
	Receiver sensitivity: 54Mbps: Typical -73dBm @ 10% PER
	                                11Mbps: Typical -86dBm @ 10% PER
	Antenna gain: 1.8 dBi

Pan/Tilt Control	Pan Viewing range 180° (-90° ~ 90°) Tilt Viewing range 90° (0° ~ 90°)
Image sensor	RGB Mega-pixel 1/4 inch CMOS Day and Night separate sensors Automatic Exposure / White Balance / Gain / Brightness control
PIR sensor	Effective distance −7 meters
Infrared Thermometer	Infrared Range: -40 ~ 115 °C , Accuracy: +- 0.5°C Field of view: 90°
Light sensitivity	0.2 Lux (IR LED off) 0 Lux (with 10 meters IR LED on) Automatically turn on the IR led in low light environment.

| Lens	4.2 mm, F2.4, viewing angle: 66°, fixed iris. focus range: 30 cm to infinity Day & Night separate lens
Buttons	One reset button to factory default settings One WPS button for automatic WiFi setup
Indicators	One LED for Internet connection status indication One LED for Ethernet connection indication One LED for SD card recording indication
Video compression	H.264, baseline profile level 3.1
Video streaming	Separate frame rate/resolution/bandwidth settings for PC and mobile
Video Settings	Resolution: WXGA(1280x800), XGA(1024x768), VGA(640x480), QVGA(320x240) Bandwidth : 64k, 128k, 256k, 512k, 768k, 1M, 1.2M, 1.5M, 2M, 3M bps Frame rate : 1~5, 10, 15, 20, 25, 30 fps
Audio	Built-in microphone for audio monitoring Built-in 0.5W speaker for alarm and half-duplex two-way audio Line out for external speaker Audio compression: G.711
Security	Web management username/password protection Video display ID/password protection WiFi WEP and WPA/WPA2 security mode
Installation, management and maintenance	Plug & Play by ID/password Video management software LiveView for video access and multi - camera management Firmware upgrades via FTP
Web browsing	Built-in web server for standard web browser access Video display on IE browser Video snapshots on any browser
Supported protocols	IPv4, HTTP, TCP, ICMP, RTSP, RTP, UDP, RTCP, SMTP, SNTP, FTP, DHCP, ARP, DNS, PPPoE, etc.
Accessories (included)	Power adaptor, camera bracket, RJ45 Ethernet cable, quick installation guide, CD with installation software and User's Manual.
Video management software	Surveillance application for viewing and archiving up to 36 cameras
Users	Up to 20 simultaneous unicast users (depends on video settings)
Alarm and event management	Events triggered by PIR and sound detection Email/Ftp alarm message Push notification on iPhone/iPad and Android devices
Dimensions (HxWxD) and weight	124 x 91 x 100 mm, 350 g, camera body only
Approvals	EMC - CE, FCC Part 15 Subpart B Class B Wireless RF - CE, FCC Part 15 Subpart C Power supply: CE, FCC, UL, EN 60950
Operating conditions	0-50 °C Humidity 20 - 80% RH (non-condensing)

5. Package Contents
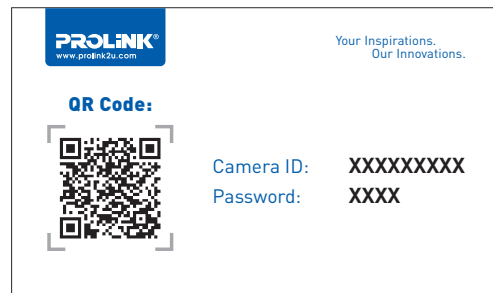
1 IP Camera
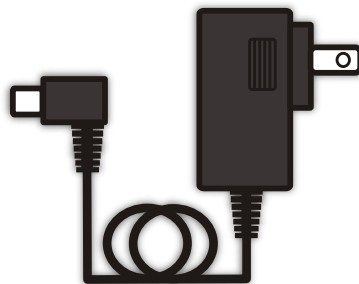
2 Quick Installation Guide
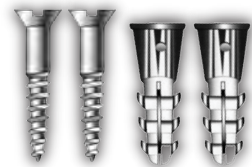

3 Setup CD
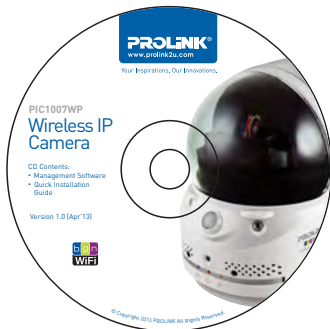
4 ID/Password Card

5 Ethernet Cable

6 Power Adapter

7 Anchors & Screws

Appendix A. List of Tested NAT/Router Device

The followings are the list of tested NAT/router devices that can work with the IP Camera and LiveView Software when viewing from remote location. You do not need to do any modification on the default settings of the NAT/routers. In some office environment, where high level firewall security is enabled, it's possible that you are not able to view the IP Camera video. In this situation, please contact your MIS person to solve the problem.

Brand Name	Model Name
PROLiNK	WNR1004, WNR1008, WNR1009, WN1010, WNR1011, H5001N, H5004N, PWH2004
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
PCi	BRL-04R
ZyXEL	Prestige-334

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

Appendix B. 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 you set the "Internet speed" setting to very high, but your actual Internet speed (bandwidth) is relatively low, it may give you a bad video quality. In some cases, the video display could even be disconnected. In order to have the best video quality, do a speed test on your broadband service from your ISP and note down the average speed from the test results. Then set the "Internet speed" of the IP Camera slightly below the average test results.

   When multiple users are viewing the videos from the same IP Camera simultaneously, the Internet speed needs to be increase by multiplying the video bandwidth with the number of users. If your actual Internet speed is not sufficient, try reduce the resolution and frame rate to accomodate the multiple users.

2. **WiFi Performance Information**

   The WiFi performance is dependent on the distance between the IP Camera and the AP (Access Point) / router and the number of devices connected to the AP/router. Take into consideration if there are any barriers like wall or floor between the IP Camera and the AP/router. If both device are situated in open space, check if the performance will be interfered during rainy day. The antenna gain and it's direction in the AP/router will also affect the WiFi performance. In general case, when the IP Camera is set to 256kbps in video setting and there are no other interference between the IP Camera and the AP/router, the working distance is about 100 meters between IP Camera and the AP/router.

3. **PIR and Motion Detection Performance Information**

   The motion detection is based on the changes in video captured by the IP Camera. Any changes in the video including moving objects (car, human, pet, door, leaves) or even light change (morning/evening) in the surveillance area could trigger the detection. The sensitivity of the motion detection is based on the size of the moving objects, the higher the sensitive means it can detect smaller objects.

   The PIR detection is based on the abrupt temperature change on the environment, any object with temperature (human or animal) moving into the detection area will trigger the PIR detection. But when the environment temperature is about the same temperature of human body(about 37 degree Celsius), the PIR detection could fail. The PIR detection effective distance is about 7 meters.

   If the detection purpose is on human intruders, the PIR will be the better choice to avoid false alarm.

Appendix C. Troubleshooting

1. **Why is the LED indicators on the camera keep on flashing in sequence?**
   This is due to the IP Camera being disconnected from the Internet. Please ensure your Ethernet or Wifi connection are setup properly and check if you have an Internet connection.

2. **How many users can access to my IP Camera?**
   The IP Camera can allow up to 20 users access simultaneously

3. **What is the video compression format for my IP Camera?**
   The video is compressed using the H.264 compression technology, which is a very high efficient compression standard and optimized for Internet streaming.

4. **What is the viewing angle of the pan and tilt control?**
   Pan viewing is 180° (-90°~90°) and Tilt viewing is 90° (0°~90°) . The camera lens viewing angle is about 66°.

5. **If I have more than one IP Camera, where can I multi-view all the camera video at the same time.**
   Please use LiveView program to do multi-viewing. LiveView can support up to 36 display windows.

6. **Can I view the IP Camera image from other web browser like Firefox or Safa**
   ActiveX is a Microsoft technology that is used to add functionality to Windows programs. It is only available on Microsoft Internet Explorer (IE) web browser. Below is guide to setup ActiveX for IE.
   - i.   Click to Control Panel > Internet Options, Internet Properties will be prompted.
   - ii. Select Security tab
   - iii. Click on Custom Level button, Security Settings - Internet Zone will be prompted.
   - iv. Scroll the list of settings to Download unsigned ActiveX controls and click either Prompt or Enable.
   - v.   Click OK button on the Security Settings - Internet Zone window,
   - vi. A warning message will be prompted, click Yes to confirm.
   - vii. Click OK button on the Internet Properties to confirm all settings and Internet Properties window will be closed automatically.
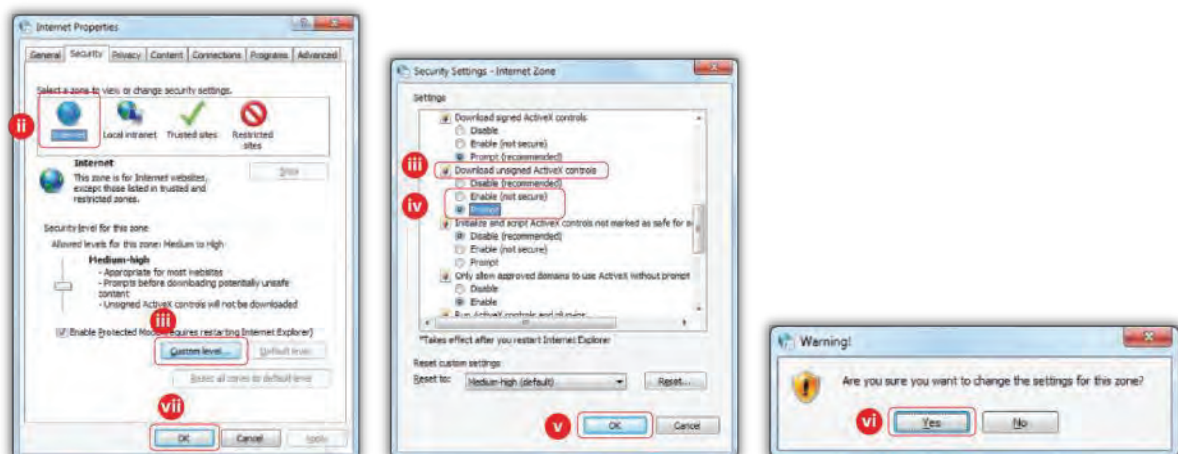
7. **Can I use LiveView in Macintosh OSX?**
   Please download Mac version of Liveview from our website. The Mac version is a beta version which means it is still work in progress therefore some functions may not work or being disabled.

8. **Can I adjust the effective focus of the IP Camera?**
   The focus of the IP Camera is pre-adjusted and fixed during production so you are not required to adjust it. Focus range is from 30cm to infinity.

9. **What should I do if my IP Camera password is forgotten?**
   The easiest way to solve this problem is to reset the IP Camera to the factory default. Please use a paper clip to hold the reset button on the bottom for 3-5 seconds to reset to factory default setting. The default password to view the camera video will be back to the original password

10. **How can I access the IP Camera web configuration page?**
    Open the LiveView software > Under Auto search > Right click the camera ID and click Web configure

11. **How can I change my IP Camera videplay password?**
    Go to the web configuration page of the camera > Login Credential > Video > Video Settings > Password (play video): type in your new password here > Save & Apply
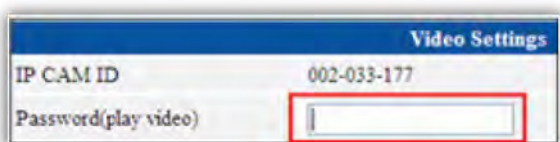
12. **What should I do if I cannot hear any audio sound from the IP Camera?**
    Go to the web configuration page of the camera > Login Credential > Video > Video Settings > Make sure Enable audio microphone is selected > Save & Apply


13. **How do I know if I need to install the Microsoft .NET Framework?**
    Since LiveView program is developed based on Microsoft .NET Framework 2.0, it is a must to install .NET 2.0 or later. However, if you're using Windows XP SP3 Professional, Windows Vista and Windows7, it's not needed to install .NET framework.

14. How do I turn the camera lens 180° if I want to hang the camera on the ceiling? wall

Go to the web configuration page of the camera > Login Credential > Video > Video Flip > Select Video Flip > Save & Apply
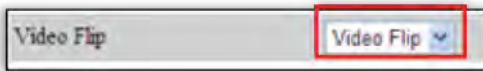
I can see the video from remote location, but the video quality is not good and sometimes the video will disconnect and reconnect again by itself.

This is probably due to the internet bandwidth (internet speed) is not big enough. You can decrease the bandwidth settings of the IP Camera.

From LiveView > Under Camera List > Right click and select Video Settings > Quality > Bandwidth > Choose the bandwidth you want to set > Update
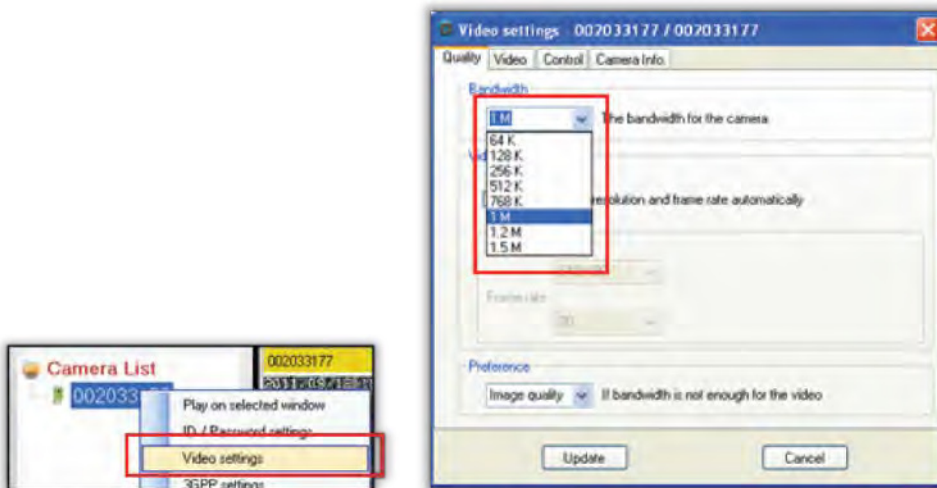
15. Does the IP Cam provide the recording function?

You can record video/audio of the IP Cam from the LiveView Software. Another software LivePlay is needed to playback the recorded video/audio files.

16. What is the recommended hard disk capacity I should prepare for the video recording?

The storage size is dependent of video resolution, bandwidth and frame rate

| Bandwidth Media	Video (Per day)	Audio + Video
64k	0.7GB	1.38GB
128k	1.3GB	2.07GB
256k	2.7GB	3.45GB
512k	5.5GB	6.22GB
768k	8.3GB	8.98GB
1M	11GB	11.7GB
1.2M	13.2GB	13.9GB
1.5M	16.5GB	17.2GB

17. Does the IP Camera come with night vision?
Yes, PIC1007WP is designed with Night Vision (or Night Mode).
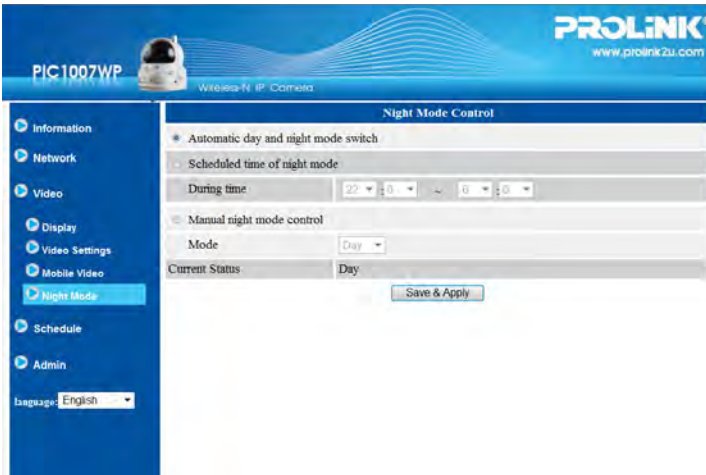
18. I can't hear any audio from my mLiveView apps on my phone.
Please make sure sound is enabled in your mobile phone. Try to play a sound file in your mobile. If it is ok then proceed to mLiveView and click on the arrow of your CamID. Select Streaming settings and make sure the Microphone is set to ON. By default it is set to ON, otherwise please change it and click Update button.
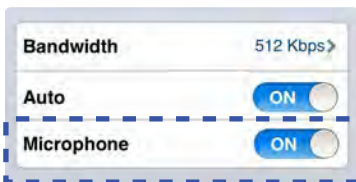
19. How to do Motion Recording in LiveView?
Right click camera image > tick Motion Recording
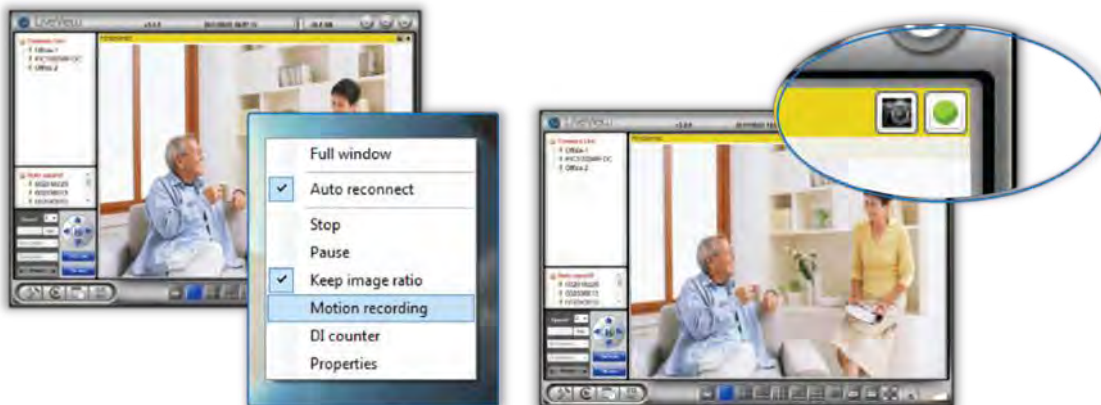
Motion Recording Status:
- Green: Standby mode
- Yellow: Motion detected and Recording in progress.

20. How to view or playback the recorded clips?
   i.   Execute LivePlay from Start > All Programs > PROLiNK > IP Camera > LivePlay
   ii.   Click Open Record, the record data windows will be prompted and all recorded clips are listed on the Recorded Files section follow by date (YYYYMMDD) of the recording sessions. Select a date.
   iii.   Select Cam Name available on the left side (below the Recorded Files) and the video clips will be playing automatically.
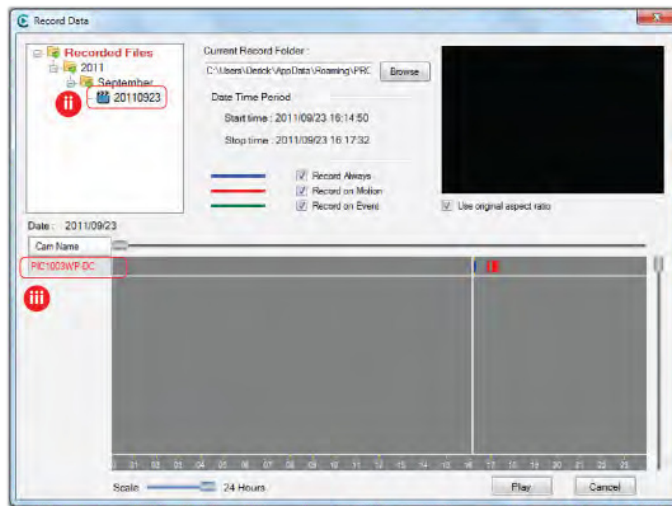
Note:
    a) All recorded video clips on the same day will be combined into one video clip playable by the LivePlay player.
    b) User can playback the recorded video clips through third-party video player, eg: VLC Player (visit official website http://www.videolan.org/vlc), and:
        i.   Open the video clips saved folder.
        ii.   Right click the video clips (file type as .crf format)
        iii.   Choose Open with option, then select to VLC media player.

21. When the recorded video is playback from my NAS storage, the top half of the video image will be running, but the bottom half will be blurred out. Why is this so?

This video distortion is due to the CPU/RAM overload for the NAS device as it takes a lot of CPU resources for the NAS to write-in the video data from many different IP Camera recording to the same NAS device solution:

a) Decrease the number of IP Camera for NAS recording simultaneously (recommends not more than 3 camera at the same time)

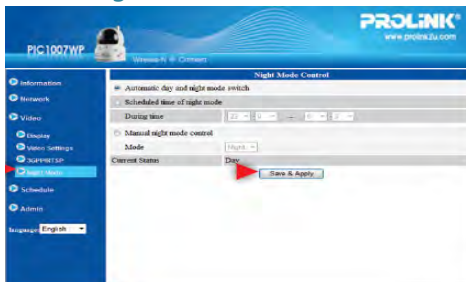b) Lower the video quality and bandwidth to make the video data smaller in order to reduce CPU load for the NAS.

22. How to configure with Night Mode?

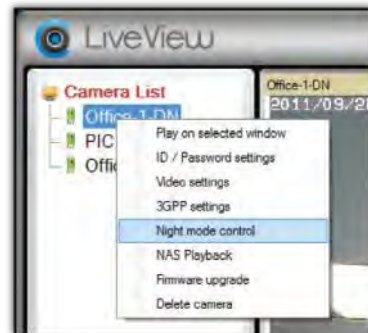There are two way in configure the IP Camera with Night Mode:

Method 1 : Via Web Configuration
Open IE and locate to the IP Address of the IP Camera>login with credential> Video> Night Mode

Method 2 : Via LiveView
From the Camera List, right click any IP Camera> Tick Night mode control

Choose either one of the following options:
a) Automatic day and night mode switch
The IP Camera will automatically turn on the IR LEDs when the night time is arrived or the environment is becoming dark. There is a light sensor on the IP Camera that is doing this light detection.
b) Scheduled time of night mode
The IP Camera can also be scheduled to turn on the IR LEDs in a time range of each day.
c) Manual night mode control
The IP Camera can be manually forced to night mode (IR LEDs on) or day mode (IR LEDs off).
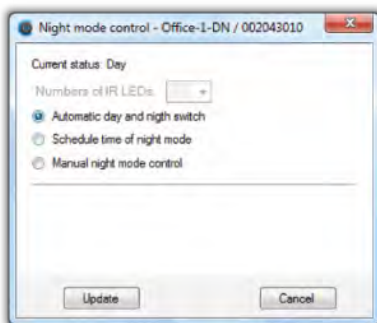
Automatic day and night mode switch
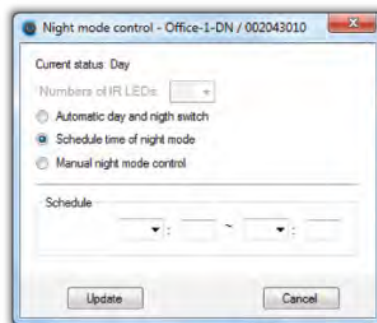
Scheduled time of night mode

Manual night mode control

23. When the IP Camera is connected to the network through wireless connection, the video quality is not good, how can I fix this problem?

Try to move the IP Camera closer to wireless AP/router if it is beyond 10 meters. Reduce the number devices if too many are connected to the AP/router. Check if the WiFi antenna is the best position.

24. What is the longest distance using the IP Camera to see the video?

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.

25. The video seems a little dark when the IP Camera is used inside the house, how can I improve this?

You can increase the "Low light sensitivity" in the "video settings" page either through web configuration or through LiveView settings to "High" or "Very high". This will tremendously improve the video quality in dark environment. PIC1007WP comes with built-in IR LED and greatly improves the video clarity even in total darkness. However when IR LED is turned on in the dark room, the video will be displayed in black and white only.

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

Yes. 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 169.254.xxx.xxx. Run the LiveView Software to access the IP Camera, the Camera ID should be displayed on the "auto-search" list. You can then see the video by double clicking the Camera ID icon.

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