

User's Manual

Ultra-mini Full HD Fixed Dome IP Camera

▶ ICA-4200



Copyright

Copyright © 2015 by PLANET Technology Corp. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of PLANET.

PLANET makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties, merchantability or fitness for any particular purpose. Any software described in this manual is sold or licensed "as is". Should the programs prove defective following their purchase, the buyer (and not PLANET, its distributor, or its dealer) assumes the entire cost of all necessary servicing, repair, and any incidental or consequential damages resulting from any defect in the software. Further, PLANET reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

All brand and product names mentioned in this manual are trademarks and/or registered trademarks of their respective holders.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

To assure continued compliance, for example, use only shielded interface cables when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it.

However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste; they should be collected separately.

Revision

User's Manual of PLANET Ultra-mini Full HD Fixed Dome IP Camera

Model: ICA-4200
Rev: 1.00 (January, 2015)
Part No. EM-ICA-4200_v1.0

Table of Contents

Chapter 1. Product Introduction	5
1.1 Package Contents.....	5
1.2 Overview.....	5
1.3 Features.....	7
1.4 Product Specifications.....	8
Chapter 2. Hardware Interface.....	10
2.1 Physical Descriptions.....	10
2.2 Hardware Installation	11
2.3 Initial Utility Installation.....	12
2.4 Using UPnP of Windows XP or 7	13
2.4.1 Windows XP	13
2.4.2 Windows 7	17
2.5 Setting up ActiveX to use the Internet Camera	18
2.5.1 Internet Explorer 6 for Windows XP.....	18
2.5.2 Internet Explorer 7 for Windows XP.....	19
2.5.3 Internet Explorer 7 for Windows Vista.....	20
Chapter 3. Web-based Management.....	22
3.1. Introduction	22
3.2. Connecting to Internet Camera.....	22
3.3 Live Viewing.....	23
3.4 Client Settings.....	25
3.5 System.....	26
3.5.1 System.....	27
3.5.2 Security.....	28
3.5.3 Network	29
3.5.4 IP Filter	33
3.5.5 Video	34
3.5.6 Audio.....	38
3.5.7 Motion.....	38
3.5.8 Privacy Mask	39
3.5.9 Event	40
3.5.10 Recording	45
3.5.11 SDHC.....	47
3.5.12 Log.....	49
3.5.13 Device Info.....	49
3.5.14 Maintenance	51
3.6 Language.....	52
Appendix A. Ping IP Address.....	53
Appendix B. Configuring Port Forwarding Manually	54
Appendix C. Troubleshooting & Frequently Asked Questions.....	56
Appendix D. Micro SD Card Compatibility	60

Chapter 1. Product Introduction

1.1 Package Contents

The package should contain the following items:

- Camera Unit x 1
- User's Manual CD x 1
- Quick Installation Guide x 1
- Screw Package x 1

 Note	<ol style="list-style-type: none">1. If any of the above items are missing, please contact your dealer immediately.2. Using the power supply that is not the one included in the Internet Camera packet will cause damage and void the warranty for this product.
---	--

1.2 Overview

Professional, High Resolution, Day and Night Surveillance

PLANET ICA-4200 Network Camera is a high-resolution camera for the round-the-clock surveillance over IP networks. It supports H.264, MPEG-4 and JPEG compression formats and delivers excellent picture quality in Full HD resolutions at 30 frames per second (fps). Incorporating the new CMOS image sensor, which is specially designed for surveillance applications, the ICA-4200 provides high quality images under all lighting conditions. It is perfect for remote and discreet monitoring of indoor areas such as stores, banks, hotels, office lobbies, and warehouses.

Full HD Resolution



Exceptional Image Quality

Together with powerful image processing attributes like Wide Dynamic Range and 2D Digital Noise Reduction (2DNR) technology, the ICA-4200 is able to filter the intense backlight surrounding a subject and remove noises from video signal. It brings an extremely clear and exquisite picture quality even under any challenging lighting conditions.





Advanced Event Management

To enhance surveillance flexibility and event management capabilities, the ICA-4200 supports a number of advanced features including auto-exposure to avoid overexposure, and inputs to connect with external devices such as door sensors to trigger the event servers. Users can save consecutive videos in local storage and events on memory card and thus you never have to miss an important moment.



Flexible Installation and Power Functionality

The ICA-4200, incorporating IEEE 802.3af Power over Ethernet standard, is able to be powered via the network cable from a PoE power sourcing equipment such as PoE switch and PoE injector. It thus eliminates the need for extra power cables and reduces installation costs while increases the deployment flexibility. In addition, the ICA-4200 is ONVIF compliant and therefore it is interoperable with other manufacturers' products. It also includes 64-ch central management software for ease of maintenance and remote monitoring. The ICA-4200 is indisputably the top choice for reliable and high performance surveillance.



1.3 Features

➤ Camera

- 1/2.5" 2 mega-pixel progressive scan CMOS sensor
- 3.6 mm fixed lens
- 0.5 lux minimum illumination at F1.8
- Maximum resolution 1920 x 1080

➤ Video / Audio

- Simultaneous H.264, MPEG-4 and M-JPEG video compressions
- Simultaneous multi-stream support
- Max. resolution 1080p at 30fps
- 2DNR to improve picture quality at low Lux
- WDR Enhancement for enhancing visibility under extremely bright or dark environments

➤ Network and Configuration

- Compliant with IEEE 802.3af PoE interface for flexible deployment
- Auto MDI/MDI-X supported
- Supports both IPv6 and IPv4

- RTSP / UPnP / HTTPS protocols selectable

➤ **Easy Installation & Management**

- ONVIF compliant for interoperability
- Built-in Samba client for NAS
- Micro SD card for local video recording supported
- Digital input/output for integration with sensors and alarms
- PLANET Smart Discovery Lite, Cam Viewer 3 central management software supported

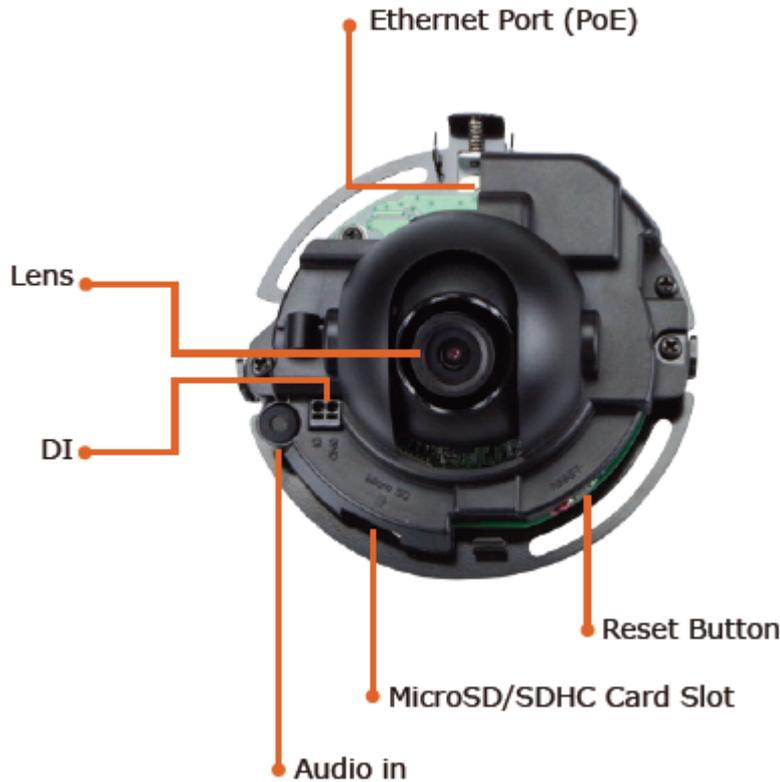
1.4 Product Specifications

Model	ICA-4200
Camera	
Image Device	1/2.5" 2 mega-pixel progressive scan CMOS sensor
Lens	3.6 mm fixed lens Angle of view : H: 60.79 degrees V: 36.52 degrees D: 67.88 degrees
Min Illuminator	0.5 lux @ F1.8
Effective Pixels	1920 x 1080 pixels
Video	
Video Encoder	H.264 / MPEG-4 / M-JPEG
High Resolution Mode	H.264@1080p MPEG4@1080p MJPEG@D1
Frame Rate	Up to 30fps for all resolutions
Image Setting	Brightness, sharpness, contrast, saturation, mirror, AWB, WDR, BLC, text, time and image overlay
Streaming	Simultaneous multi-profile streaming Streaming over UDP, TCP, HTTP, or HTTPS M-JPEG streaming over HTTP Controllable frame rate and bandwidth Constant and variable bit rate (H.264)
Audio	
Audio Streaming	Built-in microphone
Audio Encoder	G.711
Microphone	Adjustable audio input gain
Network and Configuration	
Standard	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3af

Protocol	TCP/IP, IPv4, IPv6, UDP, ICMP, DHCP, NTP, DNS, PLANET DDNS/PLANET Easy DDNS, SMTP, FTP, HTTP, HTTPS, Samba, PPPoE, UPnP, Bonjour, RTP, RTSP, RTCP
Security	Password protection, IP address filtering, HTTPS, QoS/DSCP
Users	5 clients on-line monitoring at the same time
System Integration	
Application Programming Interface	Open API for software integration ONVIF Compliant
Alarm Triggering	Intelligent video motion detection and external input 3-zone video motion detection
Alarm Events	File upload via SD card, FTP, email and SAMBA.
Video Buffering	Configurable Pre/Post alarm buffering
General	
Power Requirements	IEEE 802.3af Class 3
Power Consumption	4W max.
Operating Temperature	-10°C ~ 45°C
Operating Humidity	20% ~ 80% (non-condensing)
Weight	180g
Dimensions (Φ x L)	95 x 50 mm
Emission	CE, FCC
Connectors	10/100 Mbps Ethernet, RJ45 Built-in microphone Digital in Micro SD/SDHC card slot (Max. 32GB, Class 10) Factory default reset button

Chapter 2. Hardware Interface

2.1 Physical Descriptions



Interface	Description
Audio In	User can enable the function of the built-in microphone via audio setting in the Web UI.
Ethernet Port (PoE)	The LAN socket is an RJ45 connector for connection to 10BASE-T Ethernet or 100BASE-TX Fast Ethernet cabling. Not only can this Ethernet port detect or negotiate the transmission speed of the network automatically but also input power for camera operation. Please use Category 5 cable to connect the Network Camera to an 802.3af PoE network switch.
Lens	1/2.5" Progressive Scan CMOS.
DI	Digital input.
Micro-SD/SDHC Card Slot	User can insert a micro SD card (up to 32G) into this slot for event recording.
Reset Button	<p>This button is used to restore all the factory default settings. Sometimes restarting the camera will make the system return to a normal state. If the system still got problems after restart, user can restore the factory default settings and configure it again.</p> <p>To restore the device, please follow the steps below:</p> <ol style="list-style-type: none"> 1. Press 'Reset' button for 5 seconds to reset the device to the factory default. 2. Login the camera using the default IP (http://192.168.0.20), with "admin" for both username and password.
	<div style="border: 1px solid black; padding: 5px;">  Restoring the factory default setting will lose all the previous settings including IP address forever. User needs to back up configuration file in advance before restoring. </div>

2.2 Hardware Installation

1. Case Disassembly



Press the button to release the case.

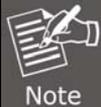
Lift up the case to remove.

2. (Optional) Inserting SD card

Remove the front cover and insert SD card.

3. Connecting Network and PoE source

Connect an Ethernet cable to the LAN socket located on the Network Camera and attach it to the network.



The camera supports IEEE 802.3af and is only powered from PoE.

4. Adjusting Lens Angle and Re-mounting the Case

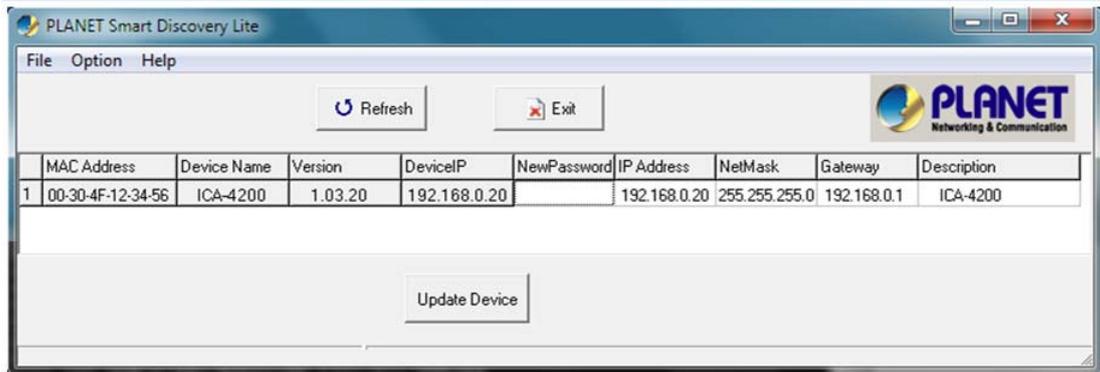
Check camera viewing angle and focus. Manually adjust lens angle that you want the area to be monitored. After adjusting the angle, re-mount the case.



2.3 Initial Utility Installation

This chapter shows how to quickly set up your H.264 camera. The camera is with the default settings. However, to help you find the networked camera quickly the windows utility PLANET Smart Discovery Lite can search the cameras in the network that will help you to configure some basic settings before you start advanced management and monitoring.

1. Insert the bundled CD into the CD-ROM drive to launch the auto-run program. Once completed, a welcome menu screen will appear.
2. Click the “Utility” hyperlink; you will see the dialog box as shown below.



3. OS: Windows XP SP2 or above. If the following “Windows Security Alert” pops up, please click “Unblock”.



4. When you install the Internet Camera in a LAN environment, you may execute PLANET Smart Discovery Lite to discover the camera’s IP address and set up related parameters in the camera.

Item	Description
	Smart Discovery Lite will search all IP cameras connected to LAN. The user can click “ Refresh ” to search again.
	You can move your mouse to IP Address, NetMask and Gateway column to change parameters and then just click the “ Update Device ” button. Enter password to complete network configuration settings.



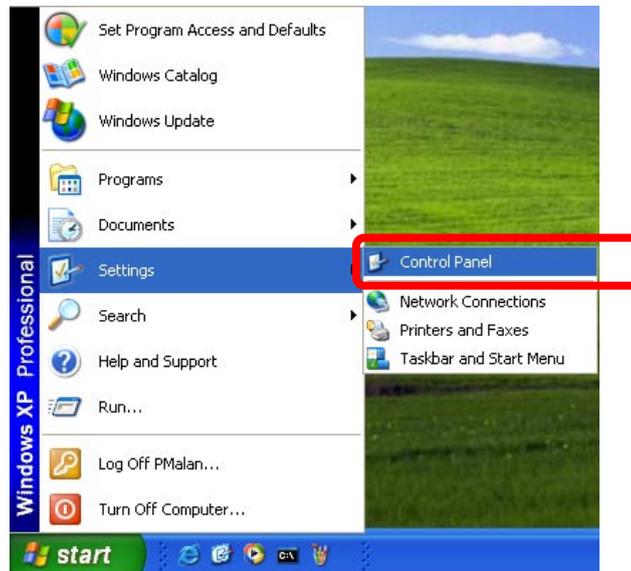
2.4 Using UPnP of Windows XP or 7

2.4.1 Windows XP

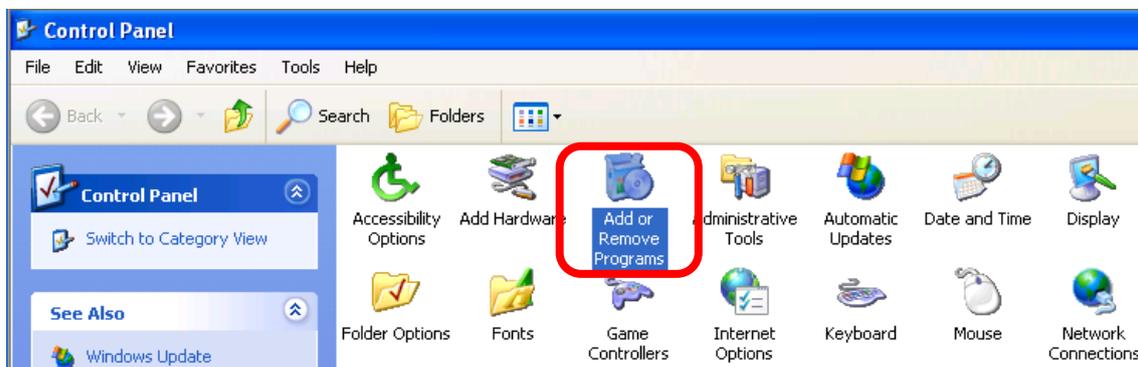
UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows XP, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows XP.

 Please note that MS Windows 2000 does not support UPnP feature.

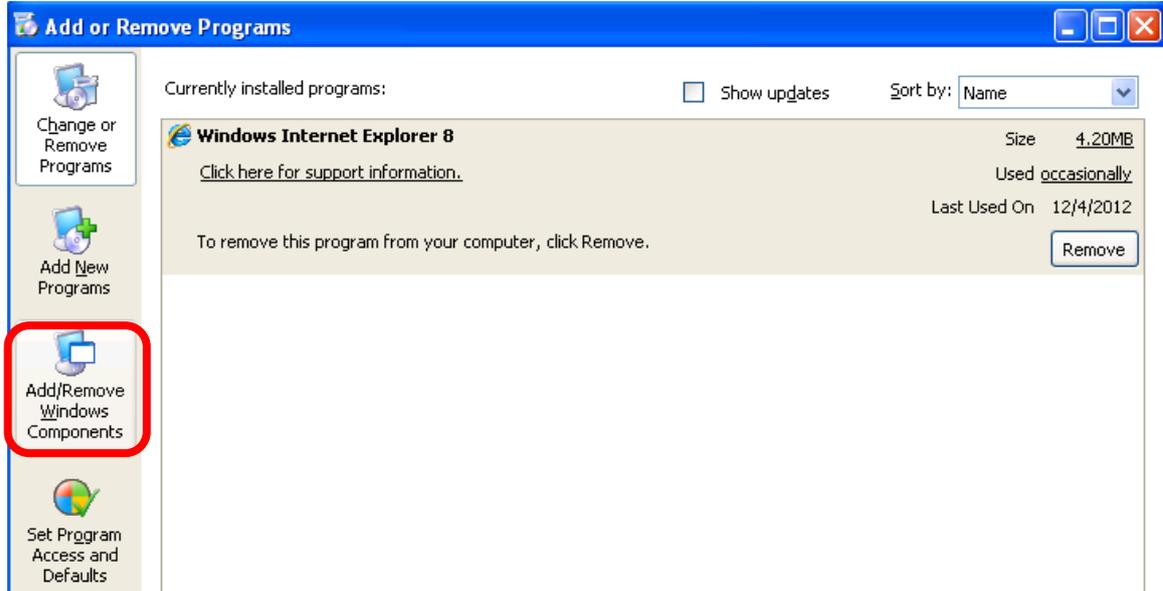
Go to **Start > Settings**, and click **Control Panel**.



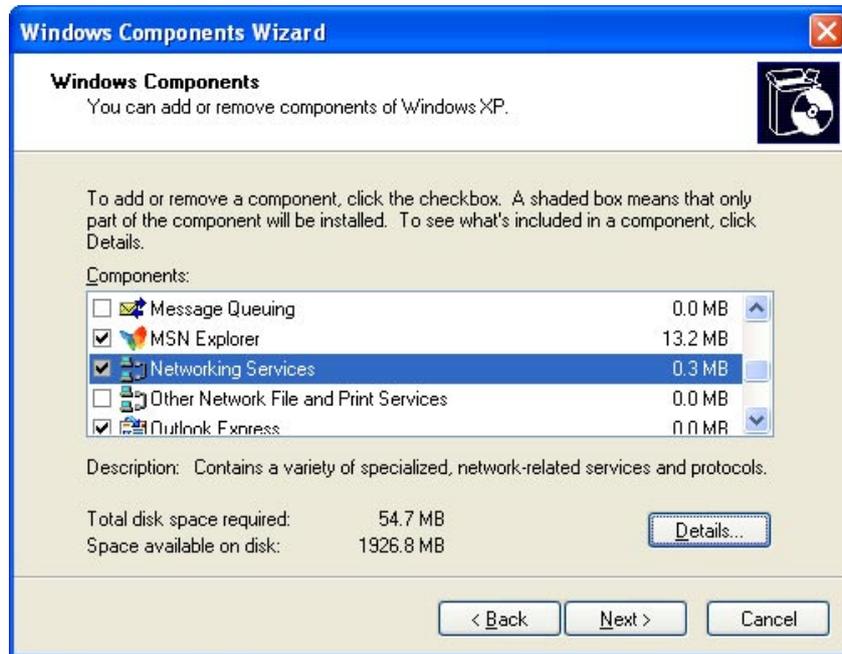
The **“Control Panel”** will display on the screen and double-click **“Add or Remove Programs”** to continue.



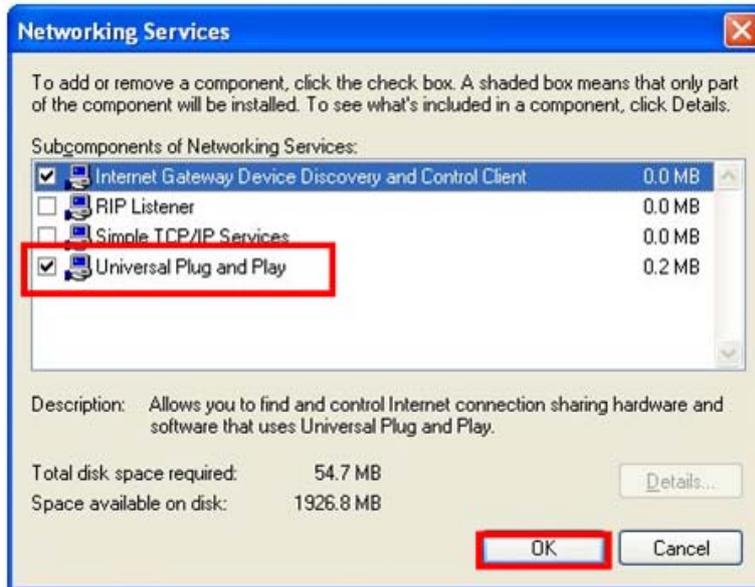
The “Add or Remove Programs” will display on the screen and click **Add/Remove Windows Components** to continue.



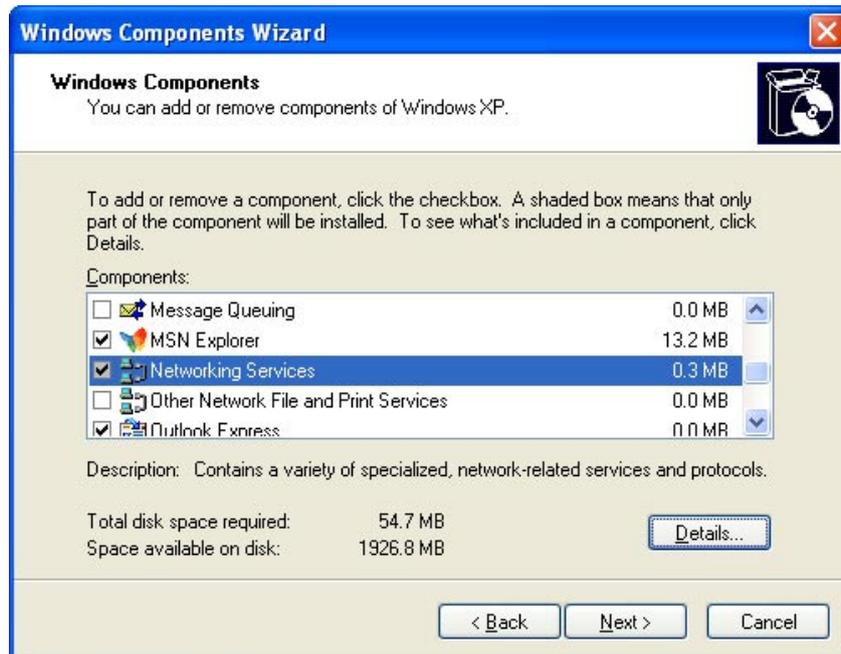
The following screen will appear. Select “**Networking Services**” and click “**Details**” to continue.



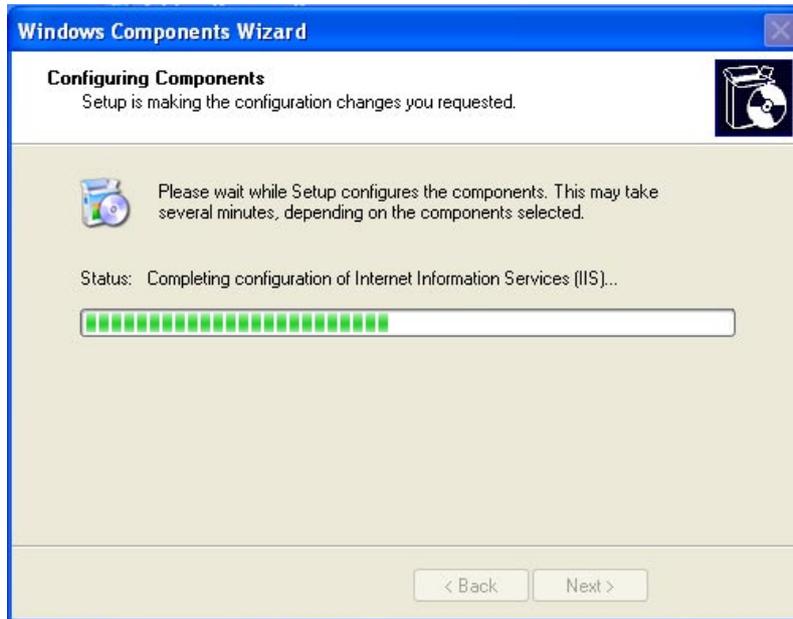
The “Networking Services” will display on the screen. Select “**Universal Plug and Play**” and click “**OK**” to continue.



Please click “**Next**” to continue.



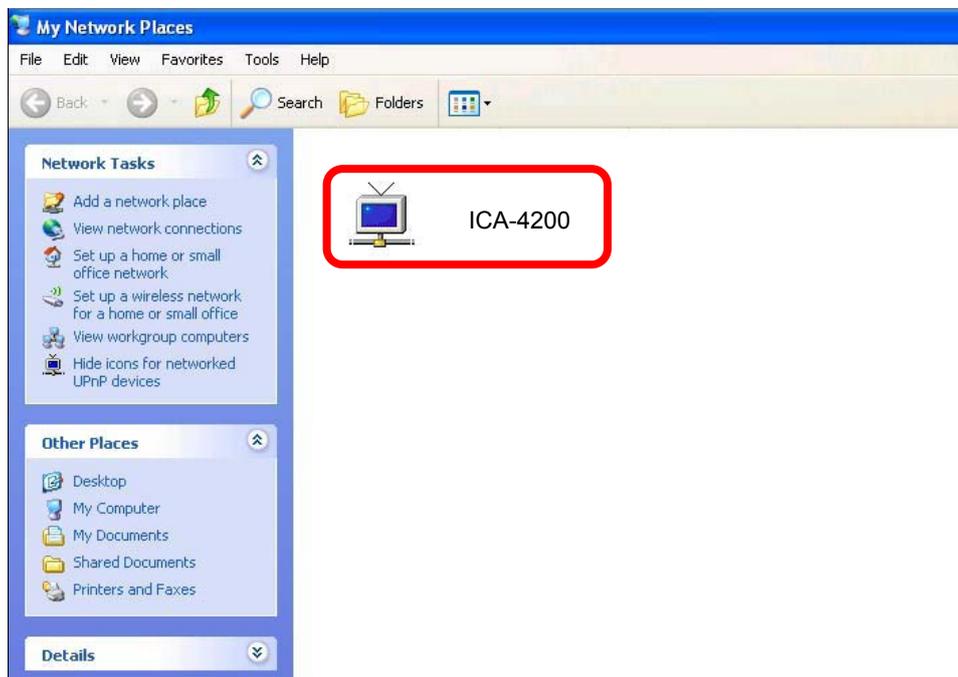
The program will start installing the UPnP automatically. You will see the pop-up screen below. Please wait while Setup configures the components.



Please click **Finish** to complete the UPnP installation.



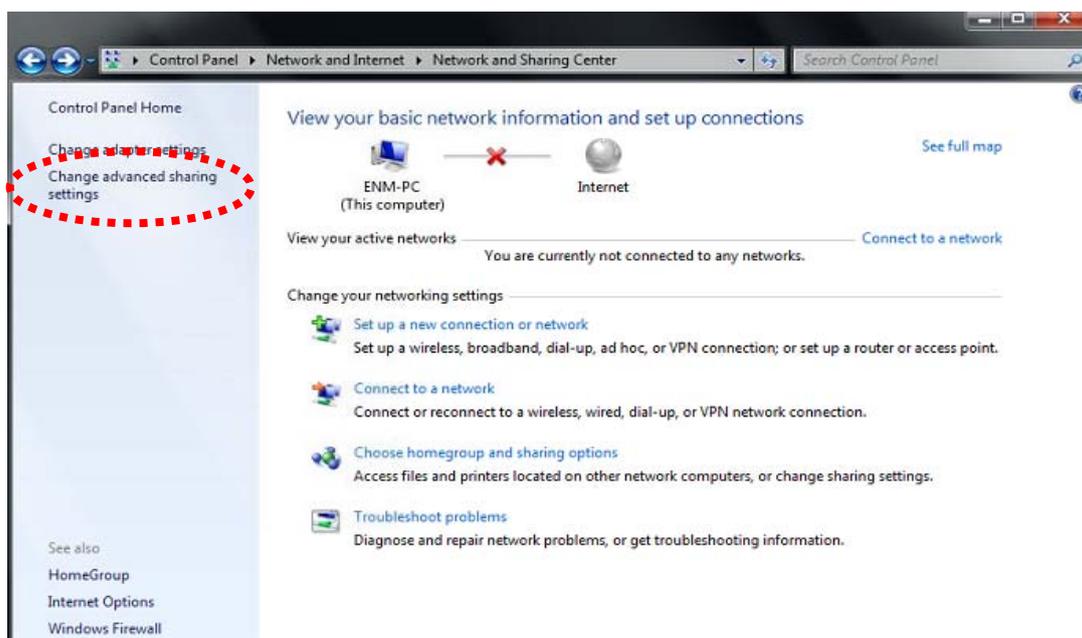
Double-click **"My Network Places"** on the desktop, and the "My Network Places" will display on the screen. Double-click the UPnP icon with Internet Camera to view your device in an internet browser.

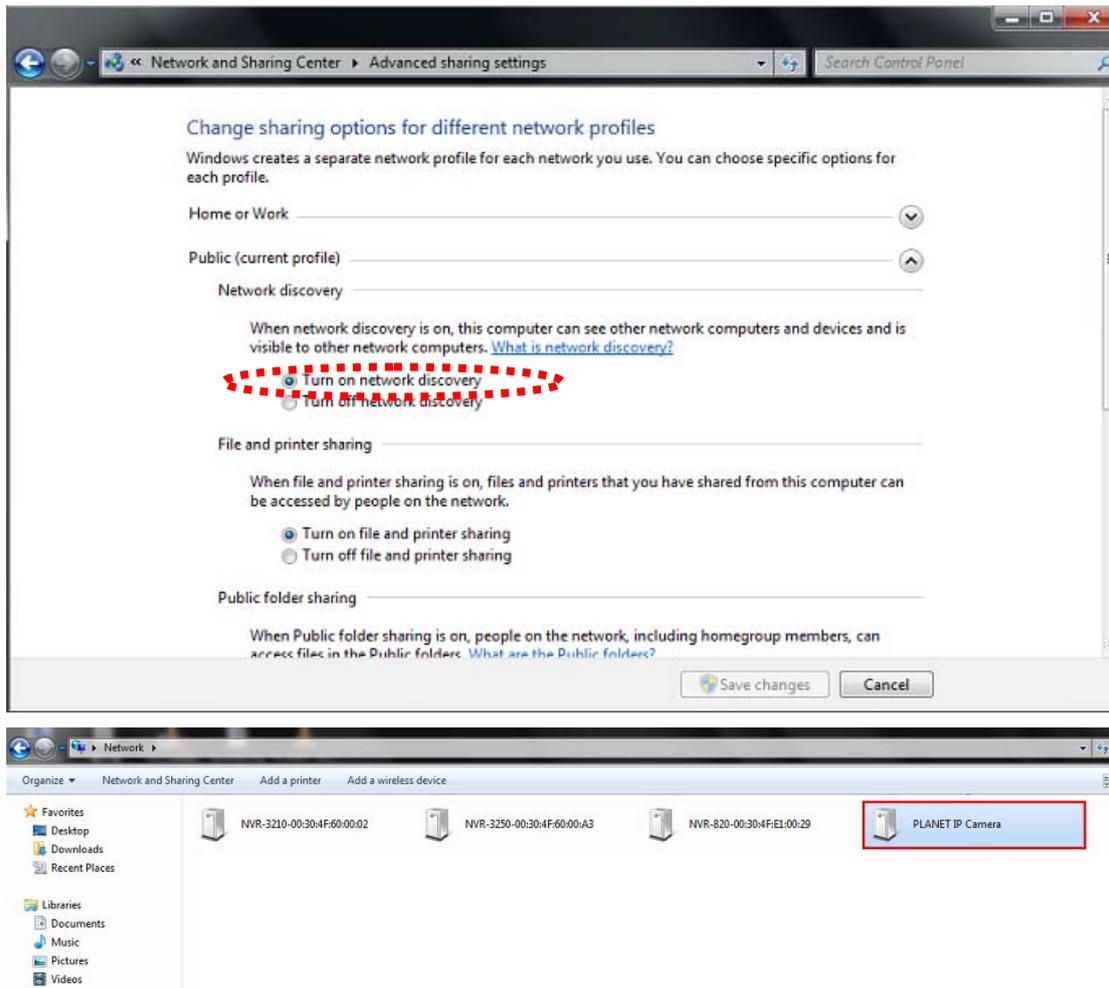


2.4.2 Windows 7

Go to **Start > Control Panel > Network and Internet > Network and Sharing Center**, if network discovery is off; click the arrow button  to expand the section.

Click **Turn on network discovery**, and then click **Apply**.  If you are prompted for an administrator password or confirmation, type the password or provide confirmation.





2.5 Setting up ActiveX to use the Internet Camera

The Internet Camera web pages communicate with the Internet Camera using an ActiveX control. The ActiveX control must be downloaded from the Internet Camera and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the Internet Camera, user must set up his IE browser as follows:

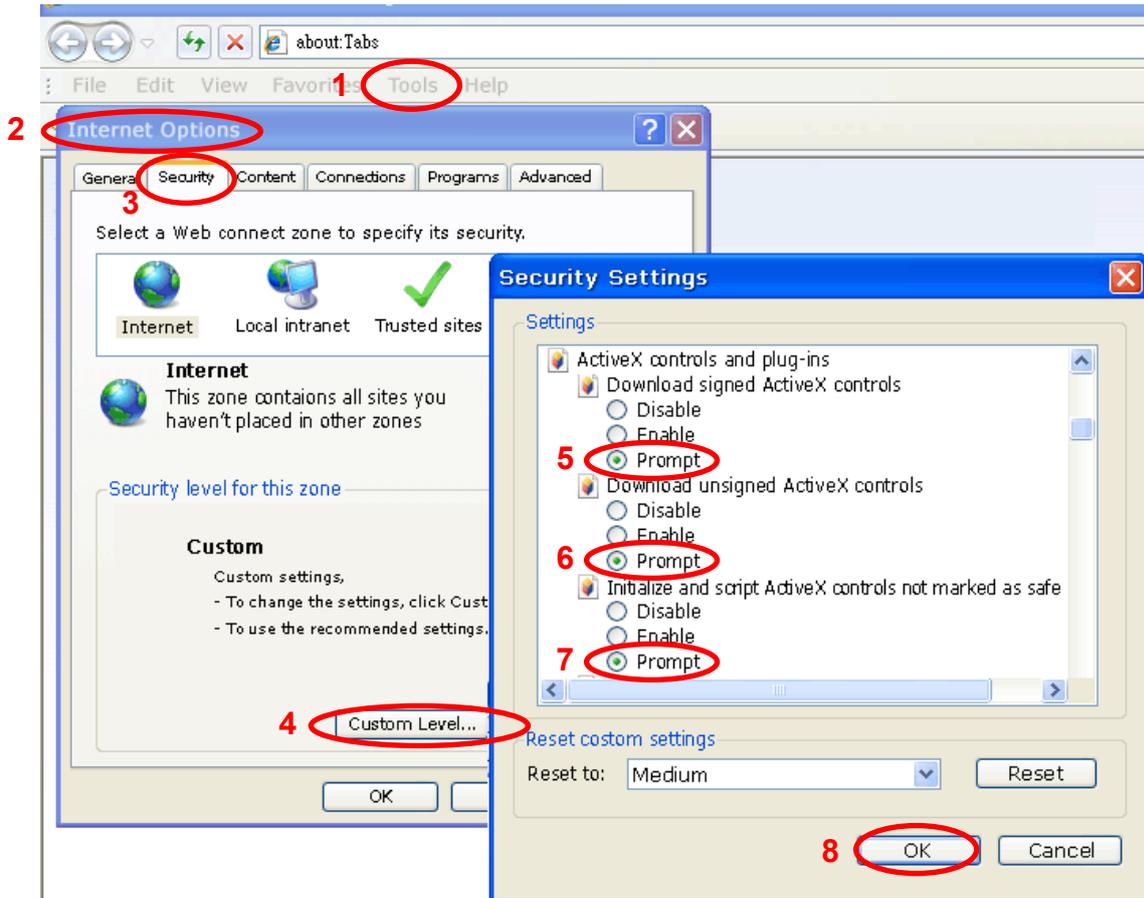
2.5.1 Internet Explorer 6 for Windows XP

From your IE browser → "Tools" → "Internet Options..." → "Security" → "Custom Level...", please set up your "Settings" as follows:

Set up the first 3 items

- *Download the signed ActiveX controls*
- *Download the unsigned ActiveX controls*

- Initialize and script the ActiveX controls not masked as safe to Prompt



By now, you have finished your entire PC configuration for Internet Camera.

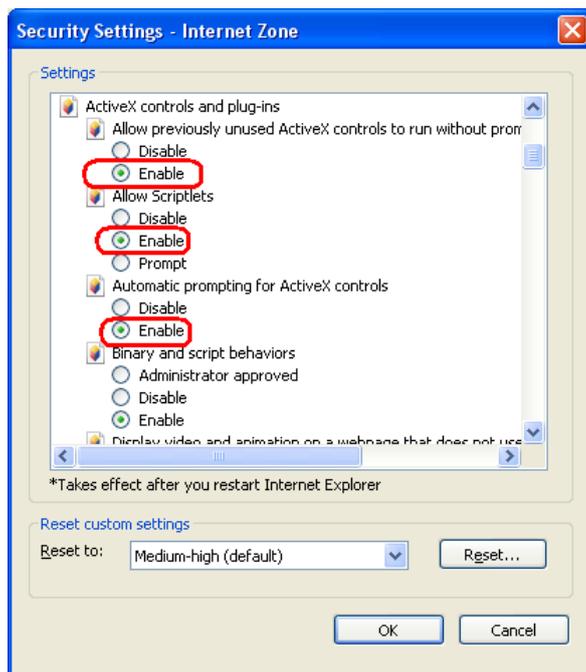
2.5.2 Internet Explorer 7 for Windows XP

From your IE browser → "Tools" → "Internet Options..." → "Security" → "Custom Level...", please set up your "Settings" as follows:

Set up the first 3 items

- Allow previously unused ActiveX control to run...
- Allows Scriptlets

- Automatic prompting for ActiveX controls

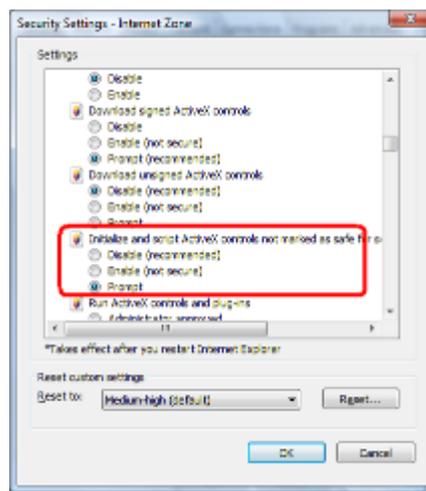
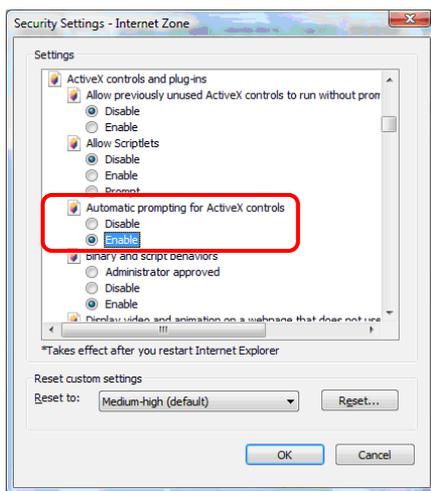


By now, you have finished your entire PC configuration for Internet Camera.

2.5.3 Internet Explorer 7 for Windows Vista

From your IE browser → "Tools" → "Internet Options..." → "Security" → "Internet" → "Custom Level...", please set up your "Settings" as follows:

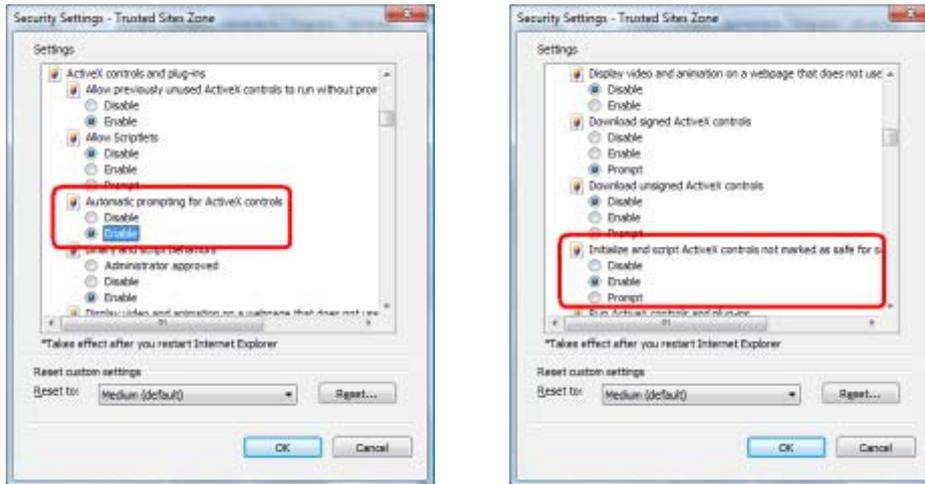
- Enable "Automatic prompting for ActiveX controls"
- Prompt "Initialize and script active controls not marked as safe for scripting"



From your IE browser → "Tools" → "Internet Options..." → "Security" → "Trusted Sites" → "Custom Level...", please set up your "Settings" as follows:

- Enable "Automatic prompting for ActiveX controls"

- Prompt “Initialize and script active controls not marked...”



By now, you have finished your entire PC configuration for Internet Camera.

Chapter 3. Web-based Management

This chapter provides setup details of the Internet Camera's Web-based Interface.

3.1. Introduction

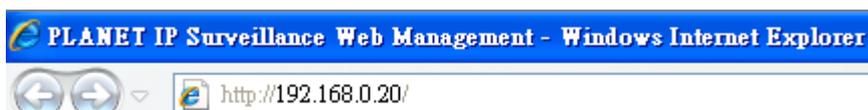
The Internet Camera can be configured with your Web browser. Before configuring, please make sure your PC is under the same IP segment as Internet Camera.

3.2. Connecting to Internet Camera

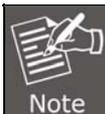
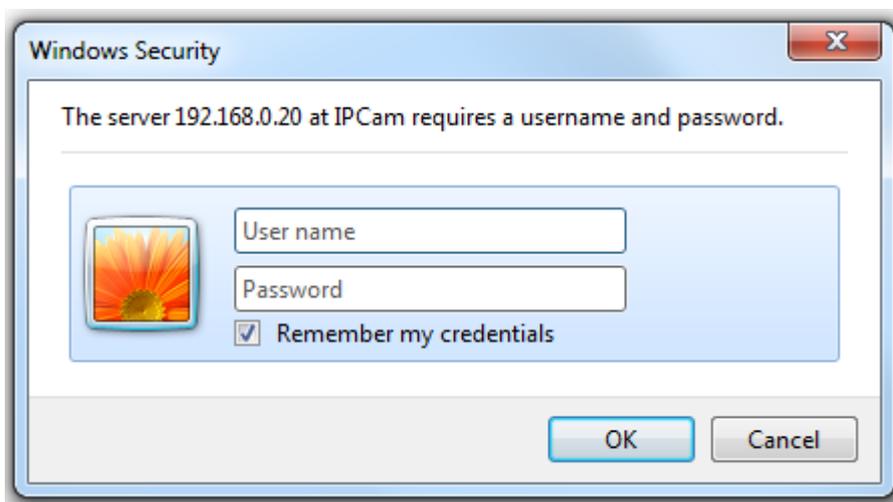
A. Use the following procedures to establish a connection from your PC to the Internet Camera.

B. Once connected, you can add the camera to your browser's Favorites or Bookmarks.

1. Start the web browser on the computer and type the IP address of the camera.
The default IP: "<http://192.168.0.20>"



2. The login window of Internet Camera will appear,
Default login **username** and **password** are both **admin**.



If the User Name and Password have been changed before, please enter the new User Name and Password here.

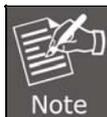
Web browser may display the "Security Warning" window. Select "Allow" to install and run the ActiveX control into your PC.



After the ActiveX control is installed and run, the first image will be displayed.



Copyright 2014 © PLANET Technology Co., LTD. All Rights Reserved.



If you log in the camera as an ordinary user, setting function will be not available. If you log in the camera as the administrator, you can perform all the settings provided within the device.

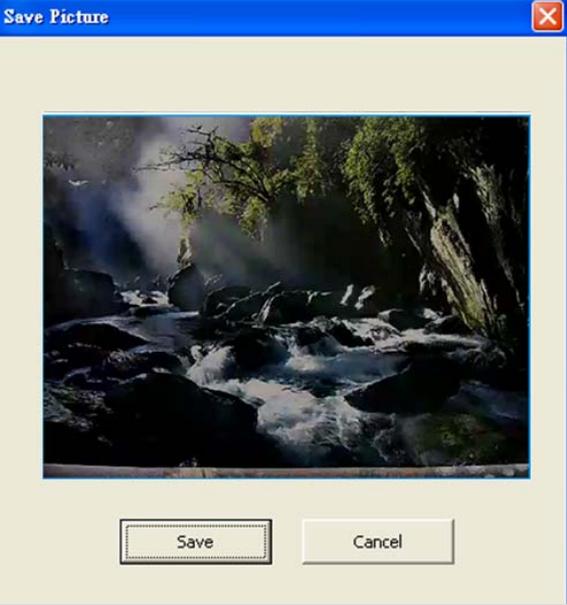
3.3 Live Viewing

Start-up screen is shown below whether you are an ordinary user or an administrator.



Copyright 2014 © PLANET Technology Co., LTD. All Rights Reserved.

Home	This button is visible in all setup pages of IP camera, and you can go back to live view by clicking this button when you're on another page.
Stream	Select video stream type: H.264 or MJPEG. H.264 required less network bandwidth and it is helpful when network connection is slow.
Client Settings	Open ' Client Setting ' menu.
Configuration	Open ' Configuration ' menu.

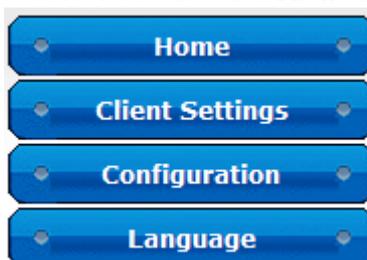
<p>Language</p>	<p>In the language menu, you can switch web interface to other languages.</p>
<p>Original Size / Fit Screen</p> 	<p>Switches live image view between original size (full size: 3M pixels) and fit screen (smaller size). If you want to see video in detail, switch to original size. If your computer monitor's resolution is not enough and you want to see full image view, switch to fit screen and image size will adjust automatically.</p>
<p>Connect</p> 	<p>Start live video view.</p>
<p>Disconnect</p> 	<p>Stop live video view.</p>
<p>Snapshot</p> 	<p>Take a snapshot or camera video and save image file on your computer. When you click this button, a new window will appear:</p>  <p>Click the 'Save' button when you see the image you wish to save, and you'll be prompted to indicate the folder on your computer to save image file. If you change your mind and don't want to save image file, click 'Cancel'.</p>
<p>Start Video Record</p> 	<p>Click this button to record video and save video file on your computer. You'll be prompted to indicate the folder on your computer to save video file.</p>
<p>Enable Digital Zoom</p> 	<p>This function will enlarge video view digitally from 1x to 3.5x, so you can see objects in video in detail.</p> <div style="border: 1px solid gray; padding: 5px;"> <p> Note</p> <p>The digital zoom that uses computer algorithm to enlarge the video and some details may be lost. If you need to focus on detail of specific objects in video view, please use optical zoom ring on lens set of IP camera.</p> </div>
<p>Enable / Disable Mute Button</p> 	<p>When mute is enabled (), you will not hear the voice from IP camera; if you want to hear voice from IP camera, click this button to disable mute ().</p> <p>You can drag the slide bar () beside the</p>

	enable/disable mute button to adjust volume.
--	--

3.4 Client Settings

Click on **'Client Settings'** menu to configure basic IP camera settings like data transfer protocol and data storage folder.

Click the **'Client Settings'** button on the left to access **'Client Settings'** menu.



The following screen will appear:

Client Settings

Protocol Option

RTSP/RTP over TCP
 RTSP/RTP over UDP
 HTTP

Storage Option

Folder:

Prefix:

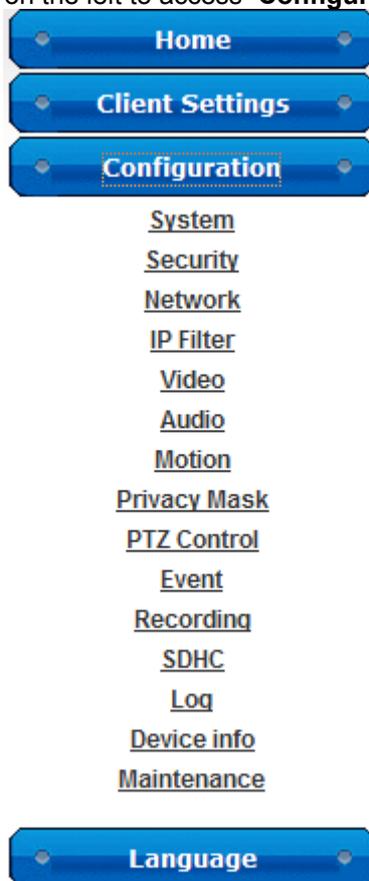
Add date and time suffix to file name

RTSP/RTP over TCP	Select this option to use RTSP (Real-time Streaming Protocol) /RTP over TCP to transfer video data.
RTSP/RTP over UDP	Select this option to use RTSP (Real-time Streaming Protocol) /RTP over UDP to transfer video data.
HTTP	Select this option to use HTTP (Hyper-Text Transfer Protocol) to transfer video data.
Folder	Select a folder on your computer to save recorded video. Click the 'Browse' button and you'll be prompted to select a folder.
Prefix	When saving video files, the characters you type in 'Prefix' field will be used as leading characters of video file's name. For example, the default setting of 'Prefix' is 'CLIP' , and video file's name will be CLIP.avi .
Add Date and Time Suffix to File Name	Check this box to add data and time to the ending part of video file name, so you can see the date and time the video file is created directly from its file name.

When you finish with the above settings, click the **'Apply'** button to save change.

3.5 System

Click the 'Configuration' button on the left to access '**Configuration**' menu.



3.5.1 System

In this menu, you can configure basic IP camera settings like host name and time.

System

System

Host Name

Indicator LED On Off

Date and Time

Camera Date and Time 01/05/2000 06:59:27

TimeZone

Daylight Saving

Keep the current date and time

Synchronize with computer time

Synchronize with NTP Server

NTP Server Address

Update Interval

Set Manually

Host Name	Input the IP camera's host name here; any words or characters that will help you to identify this IP camera can be used. Or you can use IP camera's installation location as host name, and this will help you to identify IP camera when you have many IP cameras installed.
Indicator LED	The LED lights located at the cable of IP camera are on by default. But, if you don't want other people to know the status of this IP camera, you can select ' Off ' and LED lights will be switched off.
Time Zone	Select the time zone of residence from the dropdown menu to keep the correct date and time.
Daylight Saving	If the area you live uses daylight saving, check this box; otherwise do not check this box to keep time correct.
Keep the Current Date and Time	Select this option and date / time setting will not be changed when you click ' Apply ' on the page. You can check ' Camera Date and Time ' item on this page to know IP camera's current date and time setting.
Synchronize with Computer Time	Select this item and IP camera will use your computer's time as its time.
Synchronize with NTP Server	Select this item and IP camera will keep its date and time setting synchronized with specified time server (NTP server). Please input NTP server's IP address or host name in the ' NTP Server Address ' field, and select time update interval from the ' Update Interval ' dropdown menu.

	 Note	<p>The digital zoom that uses computer algorithm to enlarge the video and some details may be lost. If you need to focus on detail of specific objects in video view, please use optical zoom ring on lens set of IP camera.</p>
<p>Set Manually</p>	<p>Set IP camera's date and time manually. Please set the current date and time from the 'Date' and 'Time' dropdown menu.</p>	

3.5.2 Security

In this menu, you can configure IP camera's login account. There are three kinds of account:

- **Administrator** : Can view IP camera's video and make changes to camera setting
- **User** : Can view IP camera's video and see LOG, and change Client Setting and language
- **Guest** : Can view IP camera's video and change language

There can be multiple users, but only one administrator is allowed, and you can't change administrator's user name (it will always be **'administrator'**).

Security

Administrator

Password

Retype Password

* Administrator password length must be between 4 and 8 characters.

Account List

Account List

User Name

Password

Retype Password

Authority

* User name length must be between 1 and 32 characters.
 * Password length must be between 4 and 8 characters.

<p>Password / Retype Password (Administrator)</p>	<p>Input administrator's new password in both 'Password' and 'Retype Password' fields, and click the 'Modify' button to change administrator's password.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;">  Note </div> <p>Don't forget administrator's password! Or you'll need to reset IP camera's all settings to get administrator's password recovered.</p>
--	--

Account List	It lists all users existed in IP camera. If you want to remove one user, click it in the list, and then click the 'Remove' button.
User Name	Input new user's username here. User name length must be between 1 and 32 characters.
Password / Retype Password	Input this user's password in both ' Password ' and ' Retype Password ' fields. Password length must be between 4 and 8 characters.
Authority	To define this user's access privilege, select ' User ' or ' Guest ' in the dropdown menu. When you finish inputting new user's information, click the ' New ' button to create a new user.

3.5.3 Network

You can configure the network camera's general and advanced network settings here.

- **General**

In this menu, you can configure IP camera's network setting. This IP camera supports both IPv4 and IPv6 IP protocols.

▶ Network

General

Advanced

Network type

LAN

- DHCP IPv4
- DHCP IPv4/IPv6
- Static IPv4/IPv6
- Enable UPnP Discovery
- Enable UPnP Port Mapping

PPPoE

Port

HTTP Port	80
RTSP Port	554
RTP Data Port	5556
Two way audio port	5432

*If you are using PPPoE, be sure to enable SMTP Service(Event > Event server) to receive PPPoE ip address through email.

LAN	<p>Select this option to assign an IP address to LAN port (or obtain an address from DHCP server automatically).</p> <p>Available options are:</p> <ul style="list-style-type: none"> - DHCP IPv4: Obtain an IPv4 IP address from DHCP server on LAN automatically. - DHCP IPv4 / IPv6: Obtain both IPv4 and IPv6 addresses from DHCP server on LAN automatically.
------------	--

	<ul style="list-style-type: none"> - Static IPv4 / IPv6: Assign an IPv4 / IPv6 address to IP camera manually. If you don't have a DHCP server on your local area network, you must use this option to specify an IP address. <ul style="list-style-type: none"> ◆ IP Address (IPv4): Input IPv4 IP address* ◆ IP Address (IPv6): Input IPv6 IP address* ◆ Prefix Length: Input IPv6 IP address' prefix length (0-128) ◆ Subnet Mask: Input subnet mask ◆ Gateway: Input gateway address ◆ Primary DNS: Input DNS server's IP address ◆ Secondary DNS: Input backup DNS server's IP address; you can leave this field blank. <p>*You can leave this field blank if you only wish to use IPv4 or IPv6 IP address.</p> - Enable UPnP Discovery: Check this box to enable other devices on the network to discover the presence of this IP camera by UPnP. It's recommended to enable this function. - Enable UPnP Port Mapping: When UPnP is enabled, check this box to enable UPnP's port mapping.
PPPoE	Select this option to use PPPoE to connect to network. You have to input PPPoE username and password assigned by network operator to get connected.
HTTP Port	Input IP camera's web connection port number here. When this port number is changed, you need to change web browser's port number you used to connect to IP camera. For example, IP camera's IP address is 192.168.1.1, and if you changed HTTP port number to 82, please input ' http://192.168.1.1:82 ' in web browser's address bar to access IP camera's web configuration interface.
RTSP Port	Input RTSP port number. When this port number changes, you must change corresponding settings in external network devices (NVR or CMS software) so they can receive this IP camera's video.
RTP Data Port	Input RTP data port number here.

When you finish with the above settings, click the 'Apply' button to save changes.

● **Advanced**

In this menu, you can configure IP camera's advance network setting.

▶ **Network**

General **Advanced**

Multicast
 Enable Multicast

Bonjour
 Enable Discovery

Qos
 Enable Qos

DDNS
 Enable DDNS

HTTPS
 Enable HTTPS
HTTPS Port

<p>Multicast</p>	<p>Enable video multicast:</p> <p>Multicast</p> <p><input checked="" type="checkbox"/> Enable Multicast</p> <p>Multicast Group Address <input type="text" value="232.128.1.99"/> * 232.0.0.0~232.255.255.255</p> <p>Multicast Video Port <input type="text" value="5560"/></p> <p>Multicast RTCP Video Port <input type="text" value="5561"/></p> <p>Multicast Audio Port <input type="text" value="5562"/></p> <p>Multicast RTCP Audio Port <input type="text" value="5563"/></p> <p>Multicast TTL <input type="text" value="15"/> *number must be between 1~255.</p> <p>Multicast Group Address: Input multicast group address here, must be an address between 232.0.0.0 and 232.255.255.255. Multicast video port: Input port number for video multicast here. Multicast RCTP video port: Input port number for RCTP video here. Multicast audio port: Input port number for audio here. Multicast RCTP audio port: Input port number for RCTP audio here. Multicast TTL: Input TTL value for multicast here.</p>
<p>Bonjour</p>	<p>If you're using Mac OS and you have Bonjour installed, you can use it to discover this IP camera.</p>
<p>QoS</p>	<p>Enable QoS to improve the data transfer priority of this IP camera (Your local area network must support QoS).</p>

	<div data-bbox="427 239 1476 504"> <p>Qos</p> <p><input checked="" type="checkbox"/> Enable Qos</p> <p><input checked="" type="radio"/> Video DSCP <input type="text" value="0"/> * number must be between (0~63).</p> <p><input type="radio"/> Audio</p> <p><input type="radio"/> Both</p> </div> <p>You can select Video / Audio's QoS DSCP value (0 to 63), or both video and audio.</p>
<p>DDNS</p>	<p>Enable DDNS function if your ISP assigns dynamic IP address to you. You must register a dynamic IP service first. Currently this IP camera supports Planet DDNS, Planet Easy DDNS and DynDNS dynamic IP service.</p> <ul style="list-style-type: none"> This model comes with Planet easy DDNS. When this function is enabled, DDNS host name will appear automatically. User can use the function easily and directly. <div data-bbox="427 728 1476 974"> <p>DDNS</p> <p><input checked="" type="checkbox"/> Enable DDNS</p> <p>Provider Planet Easy DDNS</p> <p>Host Name pl123456.planetddns.com</p> <p>DDNS status DDNS Update Success</p> </div> <ul style="list-style-type: none"> When user select Planet DDNS or DynDNS, please go to www.planetddns.com or dyn.com to register a new account first. <div data-bbox="427 1086 1476 1377"> <p><input checked="" type="checkbox"/> Enable DDNS</p> <p>Provider planetddns.com</p> <p>Host Name <input type="text"/> .planetddns.com 1~30 Charact</p> <p>User Name <input type="text"/> 1~30 Characters</p> <p>Password <input type="text"/> 1~30 Characters</p> <p>DDNS status -----</p> </div> <p>Provider: Select dynamic IP service provider. Host Name: Input the host name you obtained from dynamic IP service provider. User Name: Input user name used to login dynamic IP service provider. Password: Input the password used to login dynamic IP service provider.</p>
<p>HTTPS</p>	<p>Check 'Enable HTTPS' box to enable HTTPS channel to encrypt transferred data. You can also define HTTPS port number in the 'HTTPS Port' field if you don't want to use default value '443'.</p>

When you finish, click '**Apply**' to save changes.

3.5.4 IP Filter

When this IP camera is directly connected to Internet and not protected by firewall, this function acts like a mini built-in firewall to protect the safety of this IP camera and avoid attacks from hackers.

IP Filter

Enable Filter **Apply**

Accepted IP list

Remove

IP Address ~ **New**

Deny IP list

Remove

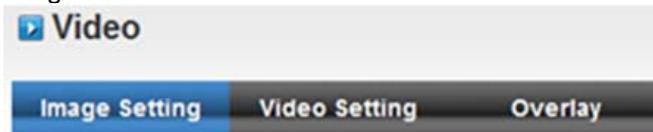
IP Address ~ **New**

Enable Filter	Check this box to enable IP address filter; uncheck this box to disable this function.
Accepted IP List	It lists all IP addresses that can build connections to this IP camera. If you want to remove a set of IP addresses from the list, click on the IP address and click the 'Remove' button.
IP Address (Accepted IP List)	Input the starting and ending IP address you wish to accept connections here. IP camera will only accept connections established from these IP addresses. If you want to specify one IP address only, input the same IP address in both fields. Click the 'New' button to add IP address to the accepted IP list.
Deny IP List	It lists all IP addresses that cannot build connections to this IP camera. If you want to remove a set of IP addresses from the list, click on the IP address and click the 'Remove' button.
IP Address (Accepted IP List)	Input the starting and ending IP address you wish to deny connections here. IP camera will deny connections established from these IP addresses. If you want to specify one IP address only, input the same IP address in both fields. Click the 'New' button to add IP address to denying IP list.

When you finish with the above settings, click the 'Apply' button to save changes.

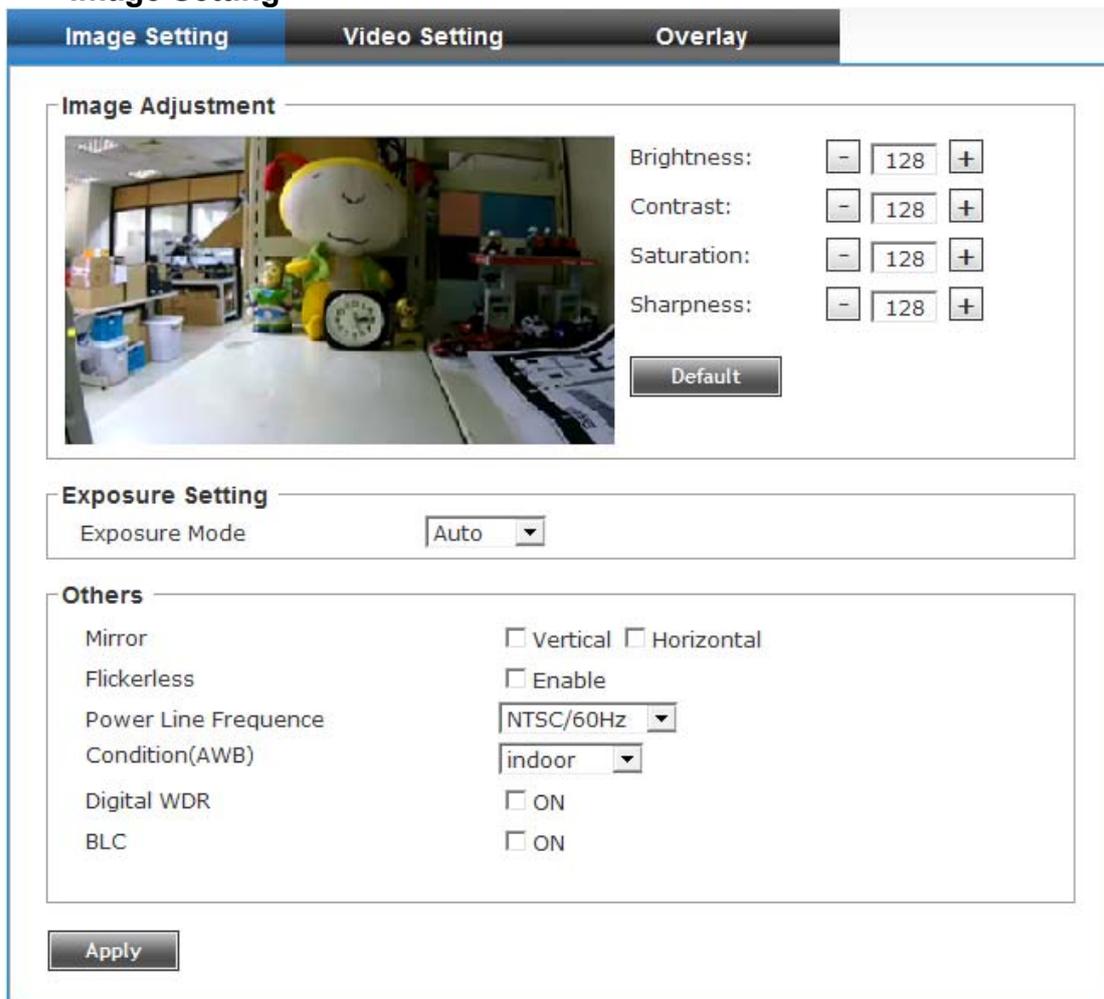
3.5.5 Video

You can adjust the image of the IP camera in this menu.



There are 3 sub-menus in this menu: **Image Setting**, **Video Setting**, and **Overlay**, which can be accessed by tabs on the top.

- **Image Setting**



Brightness / Contrast / Saturation / Sharpness	Control the image parameters. Click ' - ' to decrease value, or click ' + ' to increase value. You can also input the value in the field directly.
Default	Set all the above values to default value '128'.
Exposure Setting	Auto: It will adjust the image sensor exposure automatically. Manual: User can configure sensor exposure to fixed setting.
Mirror	Check ' Vertical ' or ' Horizontal ' box to flip the image vertically or horizontally; this will help to correct the orientation of image when IP camera is hanged bottom-up by camera holder. You can click both ' Vertical ' and ' Horizontal ' boxes at the same time.
Flickerless	Check the box to set the function as enable.
Power Line	Select the frequency of power line of the place you're using this IP

Frequency	camera. This will help to reduce the flicker of certain lights in the image.
Condition (AWB)	Select the condition that you'll be using this IP camera from the dropdown menu. Auto: It will detect environment automatically. Outdoor: For outdoor environment use. Indoor: For indoor environment use. B/W: You'll be using this IP camera in dark places where lights are insufficient. Tungsten: For low color temperature environment use. Manual: User can configure the setting.
WDR	This function is to provide clear images even under back light circumstances.
BLC (Back Light Compensation)	Enable it to allow the camera to adjust the exposure of the entire image to properly expose the subject in the foreground.

When you finish with the above settings, click the 'Apply' button to save changes.

● Video Setting

Image Setting
Video Setting
Overlay

Main Stream

H.264

Video Resolution

Frame Rate

Rate Control Video quality

Bitrate kbps 512~6000

MPEG4

MJPEG

Enable

Video Resolution

Frame Rate

Video quality

Mobile View

Enable

H.264 without Audio

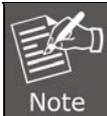
H.264 with Audio

*One snapshot is supported when MJPEG is enabled.
*Change resolution will clear the privacy mask settings.

H.264 /MPEG4	Select the compression of main stream: H.264 / MPEG4.
Video Resolution	Select video resolution. - H.264:

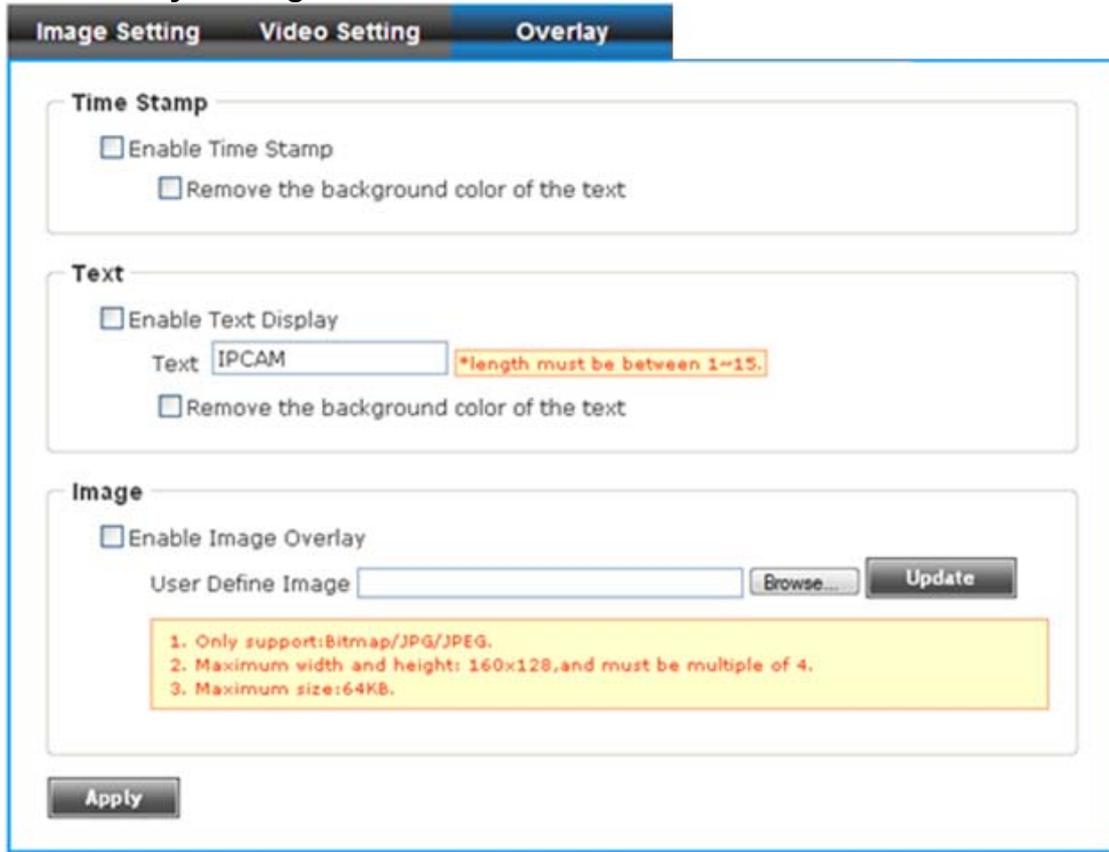
	<p>1920x1080 (1080p) / 1280x960 (960p) / 1280x720 (720p) 720x480 (D1) / 640x480 (VGA) / 320x240 (QVGA)</p> <ul style="list-style-type: none"> - MPEG4: 1920x1080 (1080p) / 1280x960 (960p) / 1280x720 (720p) 720x480 (D1) / 640x480 (VGA) / 320x240 (QVGA) MJPEG: 1280x720 (720p) / 720x480 (D1) 640x480 (VGA) / 320x240 (QVGA) <p>When network speed is insufficient, selecting a lower video resolution will be helpful.</p>
Frame Rate	<p>Select video frame rate. Please note that the frame rate of 1280x720 (MJPEG) are up to 20. The frame rates of other resolutions are up to 30. When network speed is insufficient, selecting a lower frame rate will be helpful.</p>
Rate Control	<p>Select video bit rate. You can control bit rate by 'Video quality' or 'Bit rate':</p> <ul style="list-style-type: none"> - Video quality: There are 5 levels of video quality, select 'very high' to improve video quality but consumes more network bandwidth, and select 'very low' will decrease video quality and consumes less network bandwidth. - Bit rate: Input video's bit rate directly. It must be an integer between 512 and 6000. Higher bit rate provides better video quality, but consumes more network bandwidth.
Mobile View	<p>Set the main stream as H.264 and check the box to allow remote access when you need to remote access via mobile phone.</p>

When you finish with the above settings, click the 'Apply' button to save changes.



MJPEG options are only available for portable devices like cell phone.

● **Overlay Setting**



Enable Time Stamp	Check this box to enable overlaying time stamp on video.
Remove the Background Color of the Text (for Time Stamp)	Check this box to remove time stamp's background color. You may find this will help the readability of time stamp text in some cases.
Enable Text Display	Check this box to display certain text on video; this will help when you need to identify certain IP camera when you have a lot of IP cameras. Please input the text in the 'Text' field. You can input up to 15 characters.
Remove the Background Color of the Text (for Text)	Check this box to remove custom text's background color. You may find this will help the readability of text in some cases.
Enable Image Overlay	Check this box to overlay a specific image on video, so you can show certain text / picture on the video and help people to identify this IP camera. Click the ' Browse ' button to pick a picture on your computer, and then click the ' Update ' button to use the picture. Please note that there are certain restrictions: <ul style="list-style-type: none"> - Select .bmp / .jpg / .jpeg image files only. - Image's resolution should be less than 160 x 128, and can be divided by 4. - Do not upload image files whose size is greater than 64KB.

When you finish with the above settings, click the 'Apply' button to save changes.

3.5.6 Audio

You can adjust audio input / output parameters here.

Audio

Microphone

Enable Microphone

Audio Type:

Microphone Gain:

Enable Microphone	Check this box to enable microphone. If you don't want to hear voice from IP camera, you can uncheck this box to disable it.
Audio Type (Microphone)	The format is fixed as G.711
Microphone Gain	If the voice received by microphone is too loud or silent, you can use this function to improve voice volume, so you can hear voice from IP camera more clearly. - Select 0 dB and IP camera will do nothing on the voice; - Select +6 dB to +18 dB to amplify the voice.

When you finish with the above settings, click the 'Apply' button to save changes.

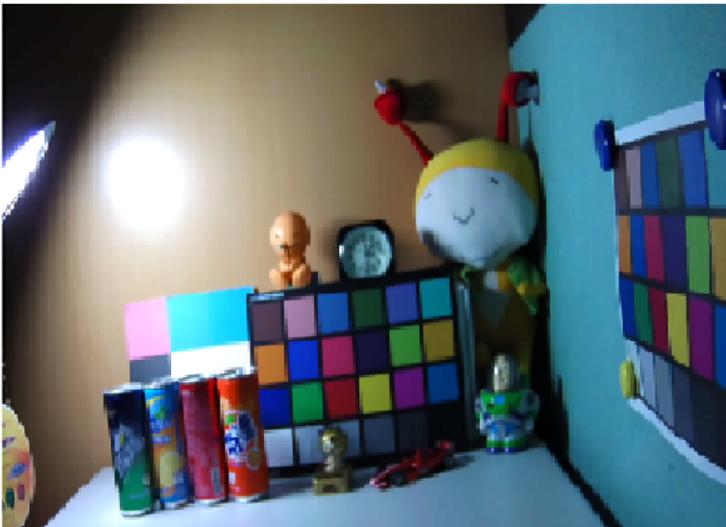
3.5.7 Motion

This IP camera is capable to detect object's motion, so IP camera will only record when there's motion and save disk storage space.

Motion detection is performed by examining the movement of objects in the rectangular motion detection area. You can define up to 3 motion detection areas.

Motion

Enable Motion Detection



Windows 1

Enable

Title:

Percentage: 50

Sensitivity: 50

Windows 2

Enable

Title:

Percentage: 50

Sensitivity: 50

Windows 3

Enable

Title:

Percentage: 50

Sensitivity: 50

Enable Motion Detection	Check this box to enable motion detection.
Enable (Window 1 to Window 3)	<p>Check this box to enable this motion detection window. You can select window 1 to 3 to enable up to 3 motion detection windows. When a motion detection window is enabled, a rectangular window will appear on camera's view, with its title on the top.</p> <ul style="list-style-type: none"> - To move / resize a motion detection window:  <ul style="list-style-type: none"> - Move: Use the mouse to drag the title text. - Resize: Use the mouse to drag the four corners (upper-left/right, lower-left/right) to resize it. If you only want to adjust width or height, drag the four sidebars (top, bottom, left, and right).
Title (Window 1 to Window 3)	Input characters in the title field to change motion detection area's title text so you can identify it. Please note that you have to click the 'Apply' button to change the text.
Percentage	Select the percentage of pixel change that will trigger motion detection alert. Select a lower percentage and you can detect tiny changes in the motion detection area.
Sensitivity	Select the sensitivity level that will trigger motion detection alert. Select a higher sensitivity and you can detect tiny changes in the motion detection area.

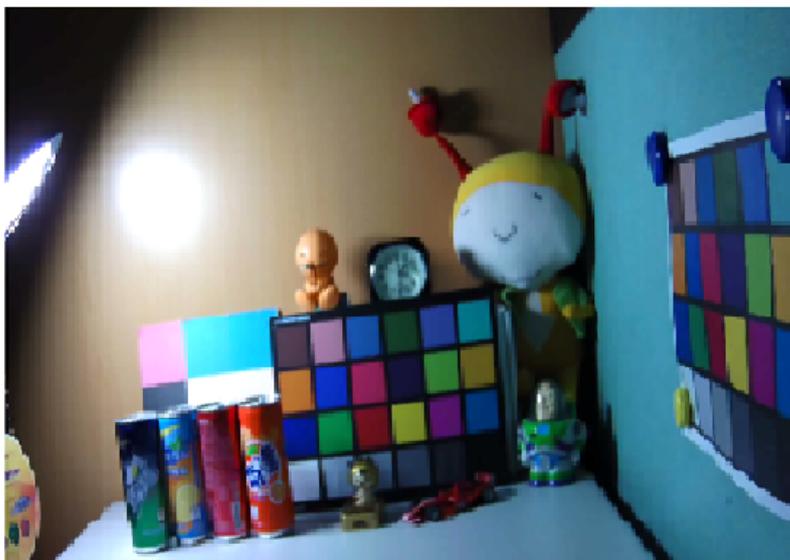
When you finish with above settings, click the 'Apply' button to save changes.

3.5.8 Privacy Mask

For the security and privacy purposes, there are three areas that can be set up for privacy mask.

Privacy Mask

Enable Privacy Mask
 Apply



Mask 1

 Enable
 Filled color

Mask 2

 Enable
 Filled color

Mask 3

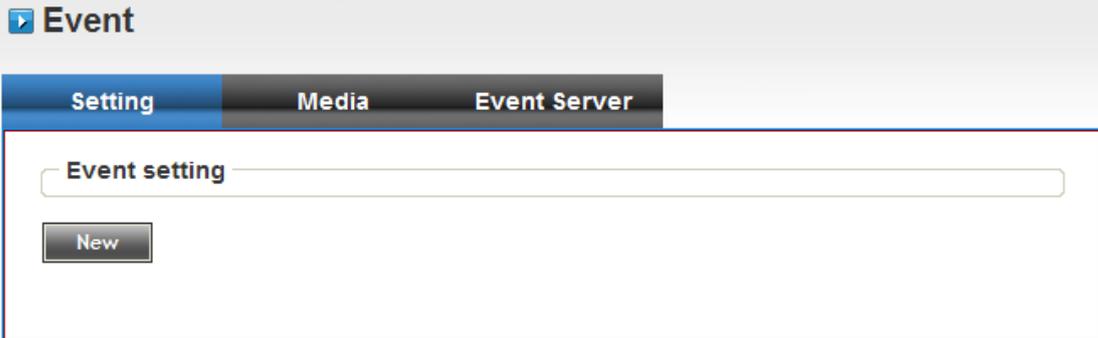
 Enable
 Filled color

Enable Privacy	Check this box to enable privacy mask function.
-----------------------	---

Mask	
Enable (Mask 1 to Mask 3)	Check this box to enable this mask window. You can select window 1 to 3 to enable up to 3 mask windows. When a mask window is enabled, a rectangular will appear on the view of camera; user could move and resize it by mouse.
Color	User could select the color of mask window.

3.5.9 Event

When there's an event, you can use this setup page to define what IP camera should do, like sending an email or triggering digital output to activate external alarm.



There are 3 sub-menus in this menu: **Setting**, **Media**, and **Event Server**, which can be accessed by tabs on the top.

- **Setting**

This page lists all the existing events. You can click the '**Modify**' button to edit an existing event, or '**Remove**' to delete an existing event.



To create a new event, just click the “New” button to add an Event setting. The setting will be shown below:

Setting

Enable Setting

Title

Trigger

Motion Detection

Digital Input 1 High

Schedule Time

Enable Schedule Time

Sun Mon Tue Wed Thu Fri Sat

Time: Always

From 00 : 00 To 23 : 59

Action

Enable FTP

Enable EMAIL

Enable Samba(Net Storage)

Enable SD CARD

Enable Setting	Check this box to enable this event. If you just want to disable this event temporarily, you can uncheck this box to keep this event disabled while not deleting it.
Title	Input any description text for this event so you can identify it quickly. It accepts these characters: A-Z,a-z,0-9,“.”,”-” and “_”.
Motion Detection	Check this box and this event will be activated when one of the motion detection windows detects motion.
Digital Input 1 or 2	Check this box and this event will be activated when digital input 1 or 2's input signal is high or low (select from the dropdown list).
Enable Schedule Time	Check this box and this event will be activated when the designated weekday and time are reached. You also have to check weekday box, and select time from the dropdown list. If you select ‘Always’ as time, this event will be activated during all the day.
Enable FTP	Check this box and IP camera will save file on FTP server (refer to ‘FTP Server’ setting in ‘Event Server’ tab) when this event is activated.
Enable Email	Check this box and IP camera will send an email to the designated recipient address (refer to ‘SMTP Server’ setting in ‘Event Server’ tab) when this event is activated.
Enable Samba (Net Storage)	Check this box and IP camera will save file on samba server (refer to ‘Samba Server’ setting in ‘Event Server’ tab) when this event is activated.

Enable SD CARD	Check this box and IP camera will save file on SD card when this event is activated. A working SD card must be inserted into IP camera in advance.
-----------------------	--

● **Media**

You can define what kind of media file should be saved on the designated media.

Event

Setting
Media
Event Server

Media

One Snapshot

Maximum Video File Size: 3MB

Pre Event second(s)

Post Event second(s)

One Snapshot	<p>Save a picture file when event is triggered.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p>This function will be enabled while “MJPEG codec” is set as enable on the “Video Setting”.</p> </div>
H.264 Video	<p>Save a H.264 video clip. You can also select the recording length before and / or after the time when event is triggered in ‘Pre Event’ and ‘Post Event’.</p> <p>For example, if you set ‘Pre Event’ to ‘5’ and ‘Post Event’ to ‘5’, and an event is triggered at 14:10:30, then the video file will be 10 seconds long, starting from 14:10:20 to 14:10:30.</p> <p>Tips: You may want to know what happened before event is triggered in many cases, especially when object is outside of motion detection window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p>If the “Pre Event” is set to “0” second, the “Post Event” cannot be set to “0” second.</p> </div>

When you finish with the above settings, click the ‘Apply’ button to save changes.

● **Event Server**

You can define the details of remote media server: FTP (File), SMTP (Email), and Samba (File).

A Samba server can be any computer running windows operating system with network neighbor function enabled. Many stand-alone network file servers also support Samba server function.

Event

Setting Media **Event Server**

FTP Server
 Enable FTP Server

SMTP Server
 Enable SMTP Server

Samba Server
 Enable Samba Server

Apply

<p>Enable FTP Server</p>	<p>Check this box to enable FTP server.</p> <p style="text-align: center;">FTP Server</p> <p><input checked="" type="checkbox"/> Enable FTP Server</p> <p>FTP Server <input type="text" value="192.168.0.174"/></p> <p>Port <input type="text" value="21"/> * number must be between 1~65535.</p> <p>User Name <input type="text" value="admin"/></p> <p>Password <input type="password" value="•••••"/></p> <p>File Path Name <input type="text" value="test"/></p> <p><input type="checkbox"/> Enable Passive Mode</p> <p style="text-align: center;">Test FTP</p> <p>FTP Server: Input FTP server's IP address or host name. Port: Input FTP server's port number. In most cases it should be default value '21'. User Name: Input FTP server's user name. Password: Input FTP server's password. File Path Name: Input the path where you want to save file on FTP server, like 'upload/record'. If you want to save file on this FTP user's home directory, you can leave this field blank. Enable Passive Mode: Check this box to force IP camera to communicate with FTP server in passive mode (Some FTP Server may only work when you check this box, while others don't). Test FTP: Click this button to test FTP server settings above immediately.</p>
<p>SMTP Server</p>	<p>Check this box to enable SMTP server.</p>

SMTP Server	
<input checked="" type="checkbox"/>	Enable SMTP Server
SMTP Server	<input type="text" value="mail.planet.com.tw"/>
Port	<input type="text" value="25"/>
Sender Email Address	<input type="text" value="support@planet.com.tw"/>
Receiver #1 Email Address	<input type="text" value="test@planet.com.tw"/>
Receiver #2 Email Address	<input type="text"/>
Subject	<input type="text" value="alarm"/>
<input checked="" type="checkbox"/>	Authentication
User Name	<input type="text" value="admin"/>
Password	<input type="password" value="•••••"/>
<input type="checkbox"/>	Requires SSL Encryption
<input type="checkbox"/>	STARTTLS
<input type="button" value="Test SMTP"/>	
<p>SMTP Server: Input SMTP server's IP address or host name. Port: Input SMTP server's port number. In most cases it should be default value '25'. Sender Email Address: Input the sender's email address that will appear in the Email send by IP camera. This will help you to identify the email sent by this IP camera, and may help when you have anti-spam software installed (you can set this email address to 'White List' in your anti-spam software) Receiver #1 Email Address: Input primary recipient's email address. This field is required. Receiver #2 Email Address: Input backup recipient's email address. This field is optional. Subject: Input email titles that will appear in the email sent by IP camera. This will help you to identify the email sent by this IP camera. Authentication: Check this box when authentication is required by the email server you're using. You also need to input email server's username and password in the corresponding field. Requires SSL Encryption: If your email server requires SSL encryption, check this box. Please note that email server uses a different port number from standard port 25 when SSL encryption is used. STARTTLS: If your email server requires STARTTLS encryption, check this box. Please note that email server uses a different port number from standard port 25 when STARTTLS encryption is used. Test SMTP: Click this button to test SMTP server settings above immediately.</p>	
Samba Server	Check this box to enable Samba server.

Samba Server

Enable Samba Server

Samba Server Address

Path

User Name

Password

Samba Server Address: Input Samba server's IP address or host name.

Path: Input the path where you want to save file on Samba server, like 'upload/record'.

User Name: Input Samba server's user name.

Password: Input Samba server's password.

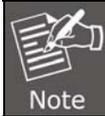
Test SMB: Click this button to test Samba server settings above immediately.

Tips: *Some Samba servers do not have username and password checks. You can just input Samba server address and path to access the file storage space.*

When you finish with the above settings, click the 'Apply' button to save changes.

3.5.10 Recording

You can save video files on SD card or Samba server.



1. Be sure that the SD Card is formatted by this device.
2. Unlike motion detection, this function will record video at specified time period on selected weekday(s).

▶ **Recording**

General

Enable External storage Recording

Maximum Size of Each File MB

Recording Schedule

Sun
 Mon
 Tue
 Wed
 Thu
 Fri
 Sat

Time: Always

From : To :

Storage Option

Memory Card
 Samba Server

Enable External Storage Recording	Check this box to record video on SD card.
Maximum Size of Each File	Input the maximum size of every video file from 5MB to 50MB. IP camera will start a new video file when a recording video file reaches the size limit stated here.
Recording Schedule	Define the recording schedule. You can check Sun to Sat boxes to represent a weekday, and specify time period in 'From' and 'To' field. Select 'Always' to record 24 hours in selected weekday(s).
Storage Option	<p>User could select Memory Card or Samba server. If the Samba server is selected, please input the settings of Samba server. Please refer to the picture:</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 5px 0;"> <p style="text-align: center;">Storage Option</p> <p> <input type="radio"/> Memory Card <input checked="" type="radio"/> Samba Server </p> <p>Samba Server Address <input type="text" value="192.168.0.62"/></p> <p>Path <input type="text" value="test"/></p> <p>User Name <input type="text" value="admin"/></p> <p>Password <input type="password" value="•••••"/></p> <p>Capacity <input type="text" value="0"/></p> <p>Max. Capacity <input type="text" value="10"/> GB (10GB ~ 500GB)</p> <p style="text-align: center;"><input type="button" value="Test SMB"/></p> </div>

When you finish with the above settings, click the 'Apply' button to save changes.

3.5.11 SDHC

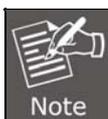
Users can implement local recording to the micro SD card up to 32GB. This page shows the capacity information of the micro SD card. Users can also format the SD card through the setting page. Please insert the SD card when the device is powered off, and then power it on.

- **Status**

Once the SD card is inserted, the UI will show the capacity of the micro SD card like the image hereunder.



Refresh	Click the button to refresh the information of micro SD card.
Eject	If user wants to remove SD card, please click the button. Then the device will disconnect SD card.
Format	Click the button to delete all data in the micro SD card.

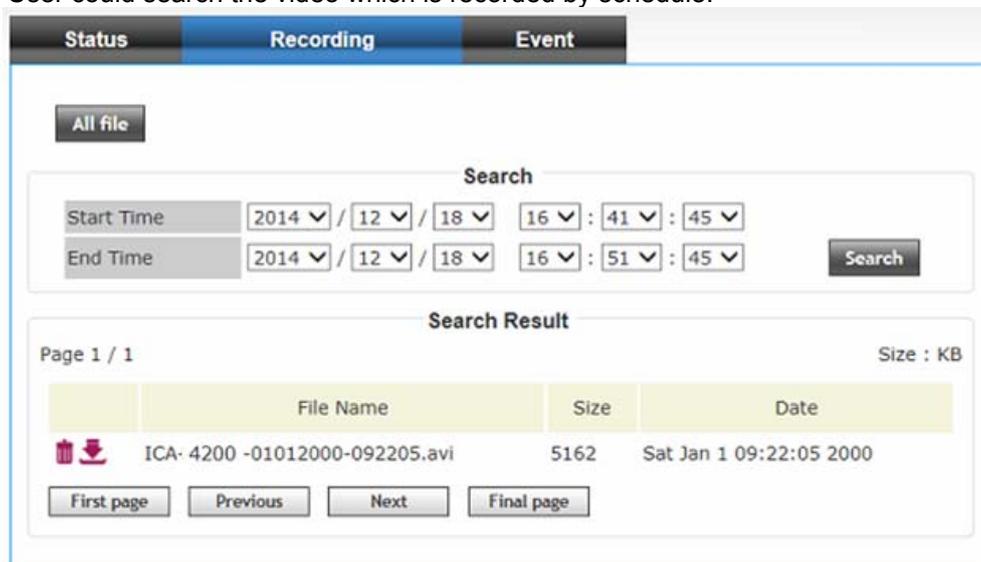


Note

Please format the micro SD card when using for the first time. Formatting will also be required when a memory card is already being used on one camera and later transferred to another camera with a different software platform.

- **Recording**

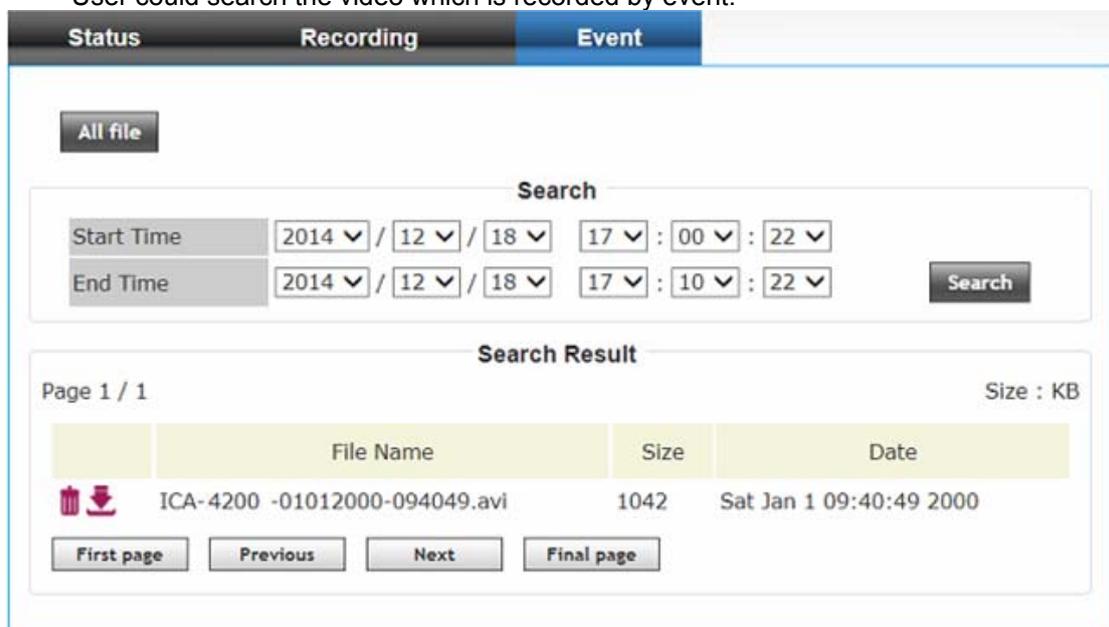
User could search the video which is recorded by schedule.



All Files	Click the button to list all files.
Search	You can define the range and click “Search” to sort the files needed.
Search Result	<p>All the searched files will be listed on the list.</p> <p> : User could remove the file by clicking the button.</p> <p> : User could download the file by clicking the button.</p> <p>First page / Final page: Jump to first / final page. Previous / Next: Jump to previous or next page.</p>

● **Event**

User could search the video which is recorded by event.



All Files	Click the button to list all files.
Search	You can define the range and click “Search” to sort the files needed.
Search Result	<p>All the searched files will be listed on the list.</p> <p> : User could remove the file by clicking the button.</p> <p> : User could download the file by clicking the button.</p> <p>First page / Final page: Jump to first / final page. Previous / Next: Jump to previous or next page.</p>

3.5.12 Log

You can check the usage log of IP camera here.

 Log

System Log

Item	Date and Time	Event
1.	01/29/2000 00:49:54	[EVENT MGR]: reload config file
2.	01/29/2000 00:47:23	admin login on 192.168.0.58
3.	01/29/2000 00:39:33	Last message repeated 1 times
4.	01/29/2000 00:39:33	[EVENT MGR]:Trigger By Motion Detection
5.	01/29/2000 00:37:56	[EVENT MGR]:Trigger By Motion Detection
6.	01/29/2000 00:14:54	admin login on 192.168.0.58
7.	01/28/2000 23:39:52	admin login on 192.168.0.58
8.	01/28/2000 23:18:34	[RTSP SERVER]:Start one session<192.168.0.20>
9.	01/28/2000 23:18:28	[RTSP SERVER]:Stop one session<192.168.0.20>
10.	01/28/2000 23:17:08	[SYS]:Recording entry 1 stop
11.	01/28/2000 23:16:00	[RTSP SERVER]:Start one session<192.168.0.20>
12.	01/28/2000 23:15:55	[RTSP SERVER]:Stop one session<192.168.0.20>
13.	01/28/2000 23:14:59	[RTSP SERVER]:Start one session<192.168.0.20>
14.	01/28/2000 23:14:53	[RTSP SERVER]:Stop one session<192.168.0.20>
15.	01/28/2000 23:13:43	[RTSP SERVER]:Start one session<192.168.0.20>
16.	01/28/2000 23:13:38	[RTSP SERVER]:Stop one session<192.168.0.20>
17.	01/28/2000 23:04:45	admin login on 192.168.0.58
18.	01/28/2000 22:34:00	admin login on 192.168.0.187
19.	01/28/2000 22:03:33	admin login on 192.168.0.58
20.	01/28/2000 21:56:14	Sync with NTP server: [2000/01/28 21:56:14]

First Page / Final Page	Jump to first / final page of log.
Previous / Next	Jump to previous or next page of log.
Remove	Clear log. You'll be prompted for confirmation.

3.5.13 Device Info

You can check the information and network settings of this IP camera. This information is very useful when you need to repair or fix the problem of this IP camera.

An example of device info page looks like this:

Device info

Basic

Camera Name	ICA-4200
Firmware version	1.03.22
MAC	00:30:4f:11:11:11
Camera Date and Time	01/05/2000 11:39:26

H.264

Video Resolution	1920x1080 (1080P)
Video Quality	Normal
Frame Rate	30 fps

Audio

Microphone In	Disable
Microphone Gain	0 dB

Mobile View

H.264 Enable	Disable
--------------	---------

Network

IP MODE	DHCP IPv4/IPv6
IP Address(IPv4)	192.168.0.20
IP Address(IPv6)	
Subnet Mask	255.255.255.0
Gateway	192.168.0.1
Primary DNS	192.168.0.1
Secondary DNS	192.168.0.2

3.5.14 Maintenance

You are able to upgrade firmware or reset this device to default setting on this page.

Maintenance

Reboot

System will be rebooted.

Restart IP Camera Automatically

Select one of the options below

Restart

Factory Reset

Factory reset will restore all the settings to factory default.

Reset all parameters, **except for the IP , time zone, and daylight saving parameters** , to the original factory settings.

Backup

Restore

Select the configuration file to restore

Firmware

Current Firmware Version 1.03.23A

Reboot	Click this button to reboot the IP camera. This function is useful when you find IP camera is not working properly.
Restart IP Camera Automatically	The device will reboot automatically according to the schedule. Please make sure the Time setting is correct when this function is enable.
Reset	(1) Clear all settings of IP camera and reset to factory default setting. (2) Reset all parameters, except for the IP, time zone, and daylight saving parameters, to the original factory settings
Backup	Back up IP camera's setting and save it on your computer.
Back Up to SD Card Device	Back up IP camera's setting and save it on SD card.
Restore	Restore a previously-saved configuration file saved on your computer. Click the 'Browse' button to select the configuration file first and then click the 'Restore' button to upload settings.
	<div style="border: 1px solid #ccc; padding: 5px; display: inline-block;">  <p>Please make sure you select the correct configuration file before you restore settings. If you upload the wrong file, the device might be damaged.</p> </div>
Restore from SD	Restore IP camera's configuration which is previously-saved on SD

Card Device	card.
Firmware Upgrade	<p>Upgrade IP camera's firmware. Click the 'Browse' button to select a firmware image file on your computer first and then click the 'Upgrade' button to upgrade firmware.</p> <div data-bbox="531 371 639 553" style="border: 1px solid black; padding: 5px;">  Note </div> <ol style="list-style-type: none"> 1. Upgrading firmware procedure cannot be interrupted. If the power or network connection is broken during the download procedure, the device might be damaged. 2. User must make sure that the firmware only applies to this device. Furthermore, do not try to upgrade new firmware if not necessary.

3.6 Language

You can change the display language of web interface. Click the '**Language**' button and select one language.



English

繁體中文

简体中文

Deutsch

český

español

ελληνικά

magyar

polski

日本語

português

русский

Slovenski jezik

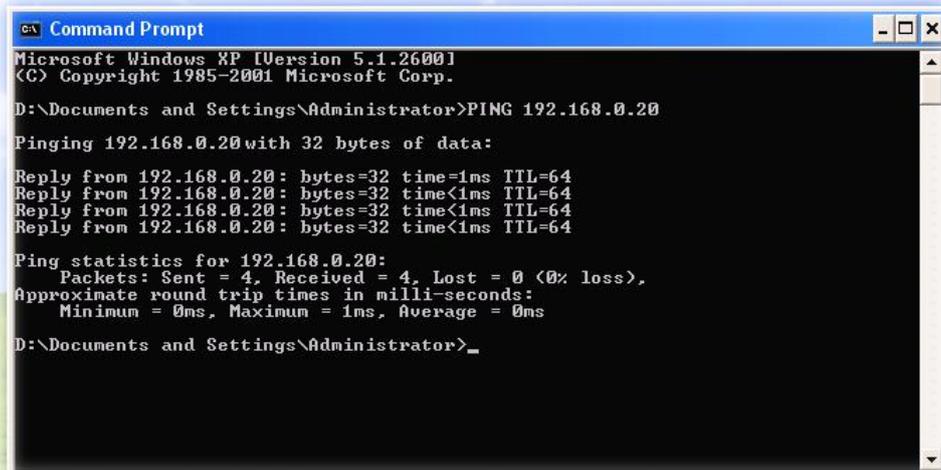
Appendix A. Ping IP Address

The ping (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm whether or not Internet camera is installed or if the IP address conflicts with any other device over the network.

If you want to make sure the IP address of Internet camera, utilize the ping command as follows:

- Start a DOS window.
- Type ping x.x.x.x, where x.x.x.x is the IP address of the Internet camera.

The replies, as illustrated below, will provide an explanation to the problem.



```
Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\Documents and Settings\Administrator>PING 192.168.0.20

Pinging 192.168.0.20 with 32 bytes of data:

Reply from 192.168.0.20: bytes=32 time=1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

D:\Documents and Settings\Administrator>
```

If you want to detect any other device that conflicts with the IP address of Internet camera, you also can utilize the ping command but you must disconnect the Internet camera from the network first.

Appendix B. Configuring Port Forwarding Manually

The device can be used with a router. If the device wants to be accessed from the WAN, its IP address needs to be set up as a fixed IP address. The port forwarding or Virtual Server function of router also needs to be set up. This device supports UPnP traversal function. Therefore, user could use this feature to configure port forwarding of NAT router first. However, if user needs to configure port forwarding manually, please follow the steps below:

Manually installing the device with a router on your network is an easy 3–step procedure as follows:

1. Assign a local/fixed IP address to your device
2. Access the Router with Your Web browser
3. Open/Configure Virtual Server Ports of your Router

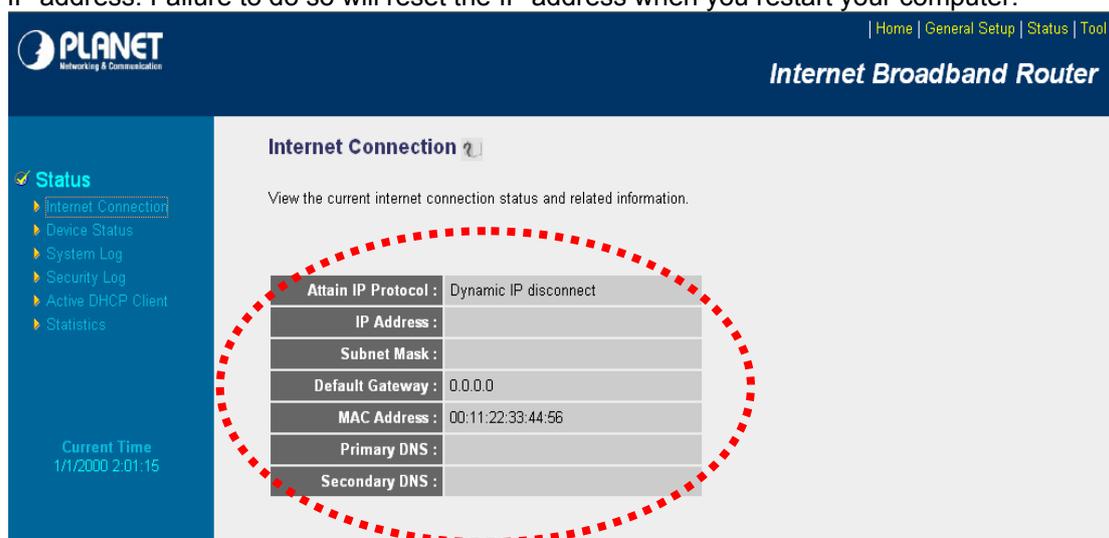
1. Assign a local/fixed IP address to your device

The device must be assigned a local and fixed IP Address that allows it to be recognized by the router. Manually set up the device with a fixed IP address, for example, *192.168.0.100*.

2. Access the Router with your Web browser

The following steps generally apply to any router that you have on your network. PLANET Wireless Router is used as an example to clarify the configuration process. Configure the initial settings of the router by following the steps outlined in the router's **Quick Installation Guide**.

If you have cable or DSL service, you will most likely have a dynamically assigned WAN IP address. 'Dynamic' means that your router's WAN IP address can change from time to time depending on your ISP. A dynamic WAN IP address identifies your router on the public network and allows it to access the Internet. To find out what your router's WAN IP address is, go to the **Status** screen on your router and locate the WAN information for your router. As shown on the following page the WAN IP address will be listed. This will be the address that you will need to type in your web browser to view your camera over the Internet. Be sure to uncheck the **Reset IP address at next boot** button at the top of the screen after modifying the IP address. Failure to do so will reset the IP address when you restart your computer.



The screenshot shows the 'Internet Connection' status page. A table lists the following information:

Attain IP Protocol :	Dynamic IP disconnect
IP Address :	
Subnet Mask :	
Default Gateway :	0.0.0.0
MAC Address :	00:11:22:33:44:56
Primary DNS :	
Secondary DNS :	

Your WAN IP Address will be listed here.

3. Open/set Virtual Server Ports to enable remote image viewing

The firewall security features built into the router and most routers prevent users from

accessing the video from the device over the Internet. The router connects to the Internet over a series of numbered ports. The ports normally used by the device are blocked from access over the Internet. Therefore, these ports need to be made accessible over the Internet. This is accomplished using the **Virtual Server** function on the router. The Virtual Server ports used by the camera must be opened through the router for remote access to your camera.

Follow these steps to configure your router's Virtual Server settings

- Click **Enabled**.
- Enter a unique name for each entry.
- Select **Both** under **Protocol Type (TCP and UDP)**
- Enter your camera's local IP address (e.g., **192.168.0.100**) in the **Private IP** field.
- If you are using the default camera port settings, enter **80** into the **Public** and **Private Port** section and click **Add**.

A checkmark appearing before the entry name will indicate that the ports are enabled.



Some ISPs block access to port 80. Be sure to check with your ISP so that you can open the appropriate ports accordingly. If your ISP does not pass traffic on port 80, you will need to change the port the camera uses from 80 to something else, such as 8080. Not all routers are the same, so refer to your user manual for specific instructions on how to open ports.


Home | General Setup | Status | Tool

Internet Broadband Router

- System
- WAN
- LAN
- Wireless
- QoS
- NAT
 - ▶ Port Forwarding
 - ▶ **Virtual Server**
 - ▶ Special applications
 - ▶ UPnP Setting
 - ▶ ALG Settings
- Firewall

Virtual Server ?

You can configure the Broadband router as a Virtual Server so that remote users accessing services such as the Web or FTP at your local site via Public IP Addresses can be automatically redirected to local servers configured with Private IP Addresses. In other words, depending on the requested service (TCP/UDP) port number, the Broadband router redirects the external service request to the appropriate internal server (located at one of your LAN's Private IP Address).

Enable Virtual Server

Private IP	Private Port	Type	Public Port	WAN Port	Comment
<input type="text"/>	<input type="text"/>	Both	<input type="text"/>	WAN1	<input type="text"/>

Current Virtual Server Table:

Private IP	Private Port	Type	Public Port	WAN Port	Comment	Select
192.168.0.100	80	TCP+UDP	80	WAN1	ICA-HM230	<input type="checkbox"/>

Enter valid ports in the **Virtual Server** section of your router. Please make sure to check the box on this line to enable settings. Then the device can be accessed from WAN by the router's WAN IP address.

By now, you have finished your entire PC configuration for this device.

Appendix C. Troubleshooting & Frequently Asked Questions

Features	
The video and audio codec is adopted in the device.	The device utilizes H.264 and M-JPEG triple compression to provide high-quality images where H.264 is standards for video compression and M-JPEG is a standard for image compression. The audio codec is defined as G.711 for RTSP streaming.
The maximum number of users that accesses the device simultaneously.	The maximum number of users is limited to 5. However, it also depends on the total bandwidth accessed to this device from clients.
Installing this device	
The network cabling is required for the device.	The device uses Category 5 UTP cable allowing 10 and/or 100 BASE-T networking.
The device will be installed and work if a firewall exists on the network.	If a firewall exists on the network, port 80 is open for ordinary data communication. The HTTP port and RTSP port need to be opened on the firewall or NAT router.
The username and password for the first time or after factory default reset	Username = admin and Password = admin . Note that it's all case sensitivity.
Forgot the username and password	Follow the steps below: 1. Power on the camera and wait a while until the boot procedure is finished. 2. Press the hardware reset button over 10 seconds, and release it. 3. Camera will reboot and restore to factory default setting. The default user name and password are both admin .
Forgot the IP address of the device.	Check IP address of device by using the PLANET Smart Discovery Lite program or by UPnP discovery or set the device to default by Reset button.
PLANET Smart Discovery Lite program cannot find the device.	<ul style="list-style-type: none"> ● Re-power the device if cannot find the unit within 1 minute. ● Do not connect device over a router. PLANET Smart Discovery Lite program cannot detect device over a router. ● If IP address is not assigned to the PC that runs PLANET Smart Discovery Lite program, then PLANET Smart Discovery Lite program cannot find device. Make sure that IP address is assigned to the PC properly. ● Antivirus software on the PC might interfere with the setup program. Disable the firewall of the antivirus software during setting up this device. ● Check the firewall setting of your PC or Notebook.

Internet Explorer does not seem to work well with the device	Make sure that your Internet Explorer is version 6.0 or later. If you are experiencing problems, try upgrading to the latest version of Microsoft's Internet Explorer from the Microsoft webpage.
PLANET Smart Discovery Lite program fails to save the network parameters.	Network may have trouble. Confirm the parameters and connections of the device.
UPnP NAT Traversal	
Cannot work with NAT router	Maybe NAT router does not support UPnP function. Please check user's manual of router and turn on UPnP function.
Some IP cameras are working while others failed	Maybe too many IP cameras have been installed on the LAN, and thus NAT router is out of resource to support more cameras. You could turn off and on NAT router to clear out of date information inside router.
Accessing this device	
Cannot access the login page and other web pages of the Network Camera from Internet Explorer	<ul style="list-style-type: none"> ● Maybe the IP address of the Network Camera is already being used by another device or computer. To confirm this possible problem, disconnect the Network Camera from the network first, and then run the ping utility to check it out. ● Maybe it's the network cable. Try correcting your network cable and configuration. Test the network interface by connecting a local computer to the Network Camera via a crossover cable. ● Make sure the Internet connection and setting are OK. ● Make sure the IP address of Internet Explorer you entered is correct. If the Network Camera has had a dynamic address, it may have changed since you last checked it. ● Network congestion may prevent the web page from appearing quickly. Wait for a while. <p>The IP address and Subnet Mask of the PC and Network Camera must be in the same class of the private IP address on the LAN.</p> <ul style="list-style-type: none"> ● Make sure the http port used by the Network Camera, default=80, is forwarded to the Network Camera's private IP address. ● The port number assigned in your Network Camera might not be available via Internet. Check your ISP for available port. ● The proxy server may prevent you from connecting directly to the Network Camera. You are advised not to use the proxy server. ● Confirm that Default Gateway address is correct. ● The router needs Port Forwarding feature. Refer to your router's manual for details. ● Packet Filtering of the router may prohibit access from an external network. Refer to your router's manual for details. ● Access the Network Camera from the Internet with the global IP address of the router and port number of Network Camera. ● Some routers reject the global IP address to access the Network Camera on the same LAN. Access with the private IP address and correct port number of Network Camera.

	<ul style="list-style-type: none"> ● When you use DDNS, you need to set Default Gateway and DNS server address. ● If it's not working after following the above procedure, reset Network Camera to default setting and install it again.
<p>Image or video does not appear on the main page.</p>	<ul style="list-style-type: none"> ● The first time the PC connects to Network Camera, a pop-up Security Warning window will appear to download ActiveX Controls. When using Windows XP, or Vista, log on with an appropriate account that is authorized to install applications. ● Network congestion may prevent the Image screen from appearing quickly. You may choose lower resolution to reduce the required bandwidth.
<p>How to check whether the device's ActiveX is installed on your computer</p>	<p>Go to C:\Windows\Downloaded Program Files and check to see if there is an entry for the file "Web Watch2 Control". The status column should show "Installed". If the file is not listed, make sure your Security Settings in Internet Explorer are configured properly and then try reloading the device's home page. Most likely, the ActiveX control did not download and install correctly. Check your Internet Explorer security settings and then close and restart Internet Explorer. Try to browse and log in again.</p>
<p>Internet Explorer displays the following message: "Your current security settings prohibit downloading of ActiveX controls".</p>	<p>Set up the IE security settings or configure the individual settings to allow downloading and scripting of ActiveX controls.</p>
<p>The device works locally but not externally.</p>	<ul style="list-style-type: none"> ● Might be caused from the firewall protection. Check the Internet firewall with your system or network administrator. The firewall may need to have some settings changed in order for the device to be accessible outside your LAN. ● Make sure that the device isn't conflicting with any other web server running on your LAN. ● Check the configuration of the router settings to allow the device to be accessed outside your local LAN. ● Check the bandwidth of Internet connection. If the Internet bandwidth is lower than target bit rate, the video streaming will not work correctly.
<p>The unreadable characters are displayed.</p>	<p>Use the operating system of the selected language. Set the Encoding or the Character Set of the selected language on the Internet Explorer.</p>
<p>Frame rate is slower than the setting.</p>	<ul style="list-style-type: none"> ● The traffic of the network and the object of the image affect the frame rate. The network congestion causes frame rate slower than the setting. ● Check the bandwidth of Internet connection. If the Internet bandwidth is lower than target bit rate, the video streaming will not work correctly. ● Ethernet switching hub can smooth the frame rate.
<p>Image Transfer on e-mail or FTP does not work.</p>	<ul style="list-style-type: none"> ● Default Gateway and DNS server address should be set up correctly. ● If FTP does not work properly, ask your ISP or network

	administrator about the transferring mode of FTP server.
Video quality of the device	
The focus on the Camera is bad.	The lens is dirty or dust is attached. Fingerprints, dust, stain, etc. on the lens can degrade the image quality.
The color of the image is poor or strange.	<ul style="list-style-type: none"> ● Adjust White Balance. ● To ensure the images you are viewing are the best they can be, set the Display property setting (color quality) to 16bit at least and 24 bit or higher if possible within your computer. ● The configuration on the device image display is incorrect. You need to adjust the image related parameters such as brightness, contrast, hue and sharpness properly.
Image flickers.	<ul style="list-style-type: none"> ● If the object is dark, the image will flicker. Make the condition around the Camera brighter.

Appendix D. Micro SD Card Compatibility

The following Micro SD/ SDHC Cards are recommended:

Apacer	SDHC	class 4	4GB
Apacer	SDHC	class 10	32GB
Silicon Power	SDHC	class 10	8GB
Transcend	SDHC	class 10	32GB
Kingston	SDHC	class 10	32GB
TOSHIBA	SDHC	class 10	32GB
SanDisk	SDHC	class 10	32GB
SAMSUNG	SDHC	class 10	32GB
RiDATA	SDHC	class 10	32GB
ADATA	SDHC	class 10	32GB