2Mega-Pixel
20M IR Vandal Proof Dome IP Camera

ICA-HM136

User's Manual

Version: 1.1

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. (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 and have to collect such WEEE separately.

Revision

User's Manual for PLANET H.264 2Mega-Pixel 20M IR Vandal Proof Dome IP Camera
Model: ICA-HM136
Rev: 1.00 (December. 2010)
Part No. EM-ICAHM136

Table of Content

1. Introduction

Thank you for purchasing the H.264 2Mega-Pixel 20 meter outdoor infrared vandal proof Internet Camera ICA-HM136. Simultaneously providing H.264, MPEG-4 and M-JPEG video streaming, provides small video size and save you lots of bandwidth. The ICA-HM136 through high performance 2Mega-Pixel CMOS sensor, it delivers high quality image at maximum 1600x1200(UXGA) resolutions for capturing color images. Also equipped with 2.7mm to 9mm Vari-focal auto iris lens, it allows easy installation and camera angle adjustment for different installed sites.

Built-in 18 IR LED around the lens of the ICA-HM136 and with the built-in IR-cut filter, the ICA-HM136 can provide good video quality in both day and night. And it's equipped with network and analog video output interfaces for flexible viewing and recording implementations.

The ICA-HM136 IP Compliant with IEEE 802.3af PoE interface for quick and easy installation in the ceiling without concerning the outlet / socket locations and also eliminates the need of power cables and installation costs. And the ICA-HM136 supports 2-Way audio that can let administrator speaks to anyone directly to make audio communication between local and remote ICA-HM136 installed sites by using the external microphone and adding an external speaker.

PLANET ICA-HM136 designed with vandal-proof and IP66 weather-proof case that can shield 400 pounds of impact. The vandal-proof design with die-cast aluminum body prevents the intentional destruction. Water-resistant construction with weather-proof solid housing maintains the reliable operation in any environment. It is the perfect choice for outdoor surveillance system by providing IP-66 certified water-proof protection.

The ICA-HM136 can be managed by PLANET CamViewer Three, the professional IP-Surveillance management software for multi-camera video surveillance application, that provides monitoring, recording and event management functions. The CamViewer Three enables you to setup a comprehensive and effective surveillance system quickly and easily, it provides an enhanced, professional, and secured environment to protect your property and life.

1.1 Overview

This user's guide explains how to operate this camera from a computer. User should read this manual completely and carefully before you operate the device

1.2 Features

- High resolution pictures for day and night with high quality of 2 Mega-Pixel CMOS image sensor
- Built-in IR LED and visible distance up to 20 meters
- Support 3GPP and JAVA for iPhone and Windows mobile for remote view
- Supports H.264, MPEG-4 and M-JPEG video compression
- Easy configuration and management via Windows-Based utility or web browser
- DDNS, PPPoE and FTP uploading offers more alternatives in surveillance network
- Motion Detection feature can monitor any suspicious movement in a specific area
- 2-Way audio supported with external speaker and microphone
- IR-Cut filter brings better video quality in the daytime and nighttime

- IP-66 protection for outdoor application
- Compliant with IEEE 802.3af PoE interface

1.3 Package Contents

User can find the following items in the package:

Camera unit x 1
Power Adapter x 1
Accessories Kit x 1
User's Manual CD x 1
Quick Installation Guide x 1

NOTE:
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 Internet camera packet will cause damage and void the warranty for this product.

2. Basic Setup

This chapter provides details of installing and configuring the Internet camera

2.1 System Requirements

Network Interface	10/100Base-TX Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or later
System Hardware (Suggested)	· CPU: Intel Dual Core 1.66G · Memory Size : 1024 MB (1024 MB or above Recommended) · VGA card resolution : 1024 x 768 or above · VGA card memory : 128 MB or above
System Hardware (Minimum)	· CPU: Intel C-2.8G · Memory Size : 512 MB · VGA card resolution : 1024 x 768 · VGA card memory : 64 MB

NOTE: The listed information is minimum system requirements only. Actual requirement will vary depending on the nature of your environment.

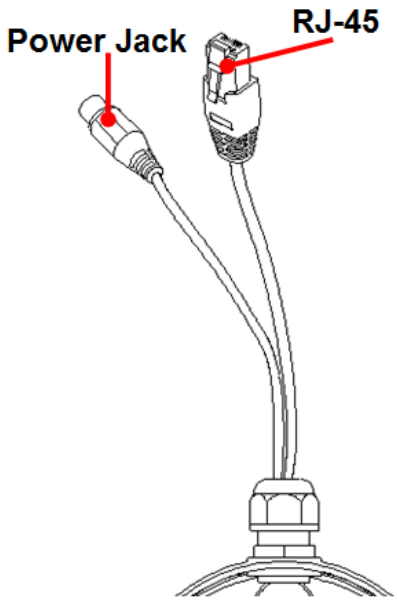
2.2 Physical Description

2.2.1 Identification of ICA-HM136 cable

1.RJ-45 LAN socket: Connect to PC or Hub/Switch.

For connect to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built N-Way protocol can detect or negotiate the transmission speed of the network automatically. Please use CAT-5 cable to connect the Network Camera to a 100Mbps Fast Ethernet network switch or hub.

2.Power Jack: The input power is DC 12V.



NOTE: ONLY u se package po wer a dapter supplie d with the Intern et. Otherwi se, the product may be damaged.

2.2.2 ICA-HM136 I/O Control Instruction

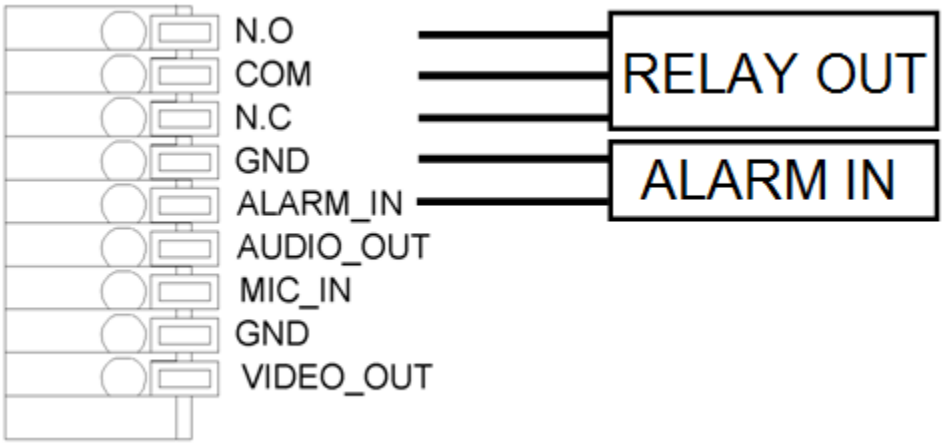
I/O terminal connector – used in application, for e.g., motion detection, event triggering,

(1)Digital Input: (GND+Alarm)
An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active.

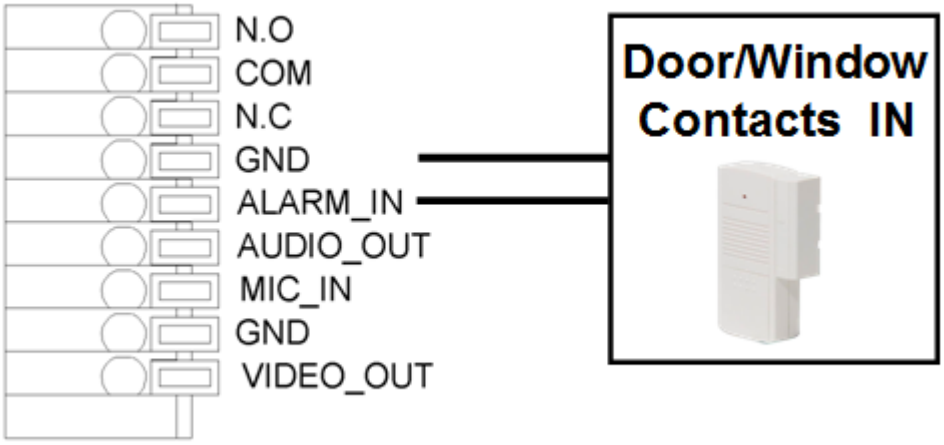
(2)Relay output: (COM +N.O.) / (COM+N.C.)
An output to Relay switch, for example: LEDs, Sirens, etc.

1.Digital Input:
Alarm Input:
1. GND (Ground) : Initial state is LOW
2. Alarm : Max. 50mA, DC 3.3V

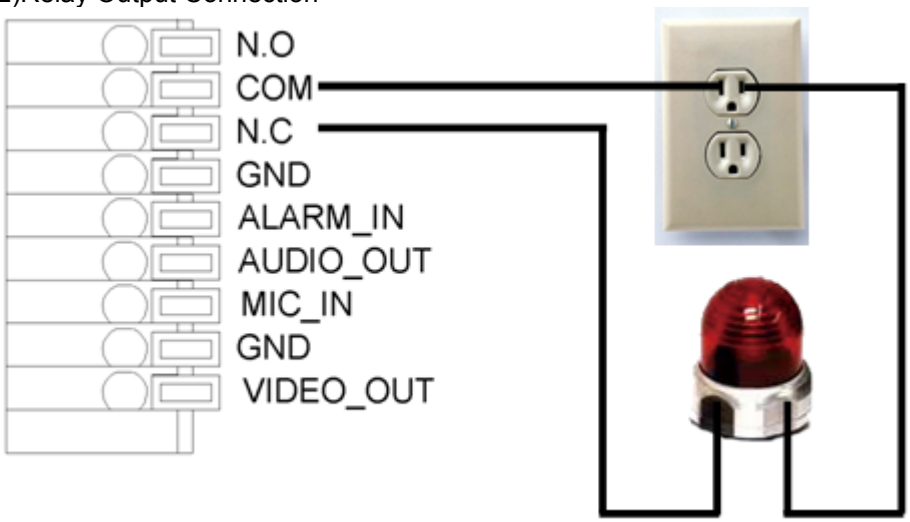
2.Relay Output:
1. N.C. (Normally Close): Max. 1A, 24VDC or 0.2A, 110~240VAC
2. COM: (Common)
3. N.O. (Normally Open): Max. 1A, 24VDC or 0.2A, 110~240VAC



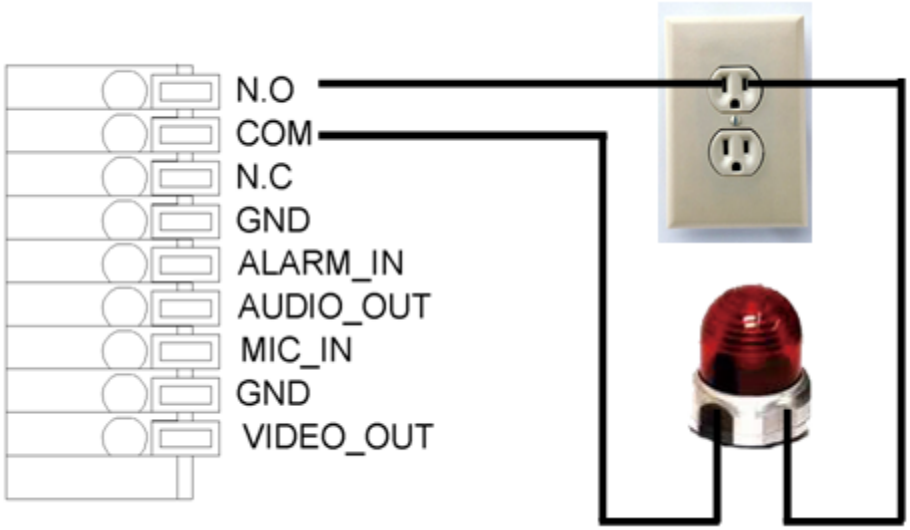
3.Relay Connection:
(1)Digital Input connection



(2)Relay Output Connection



Or



4.MIC_IN:
Connect a microphone to the network camera.

5.AUDIO_IN

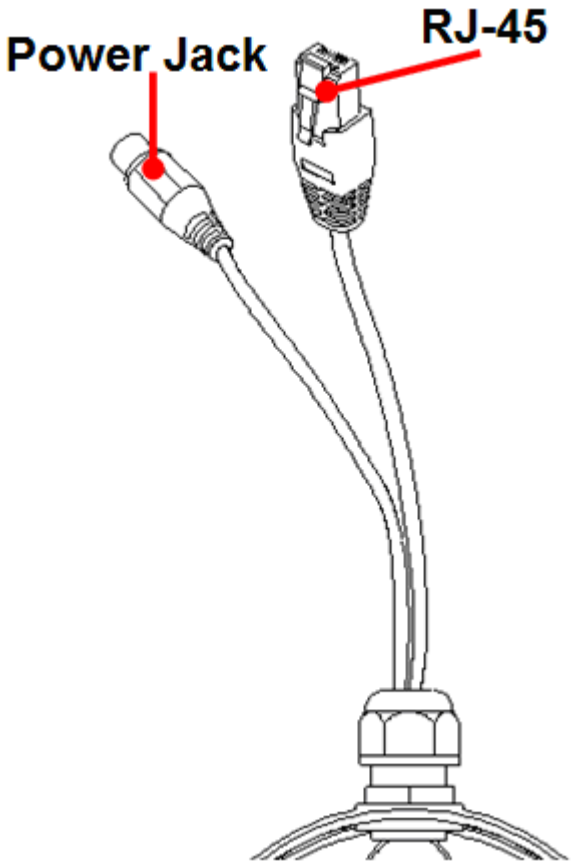
Connect a loud speaker to the network camera. This is for voice alerting and two-way audio.

2.3 Hardware Installation

2.3.1 Physical Installation

1. Fix Internet camera to desired location with mount fixture

2. Connect an Ethernet cable



Connect the LAN cable on the camera to the network device (hub or switch).

NOTE: If there has an IEEE802.3af PoE switch in your network, you can connect the camera LAN cable to this PoE switch to obtain power. The power adapter is unnecessary when Internet camera is connected to a PoE switch.

3. Attach the power supply

Plug in power adapter and connect to power source. After power on, the camera will start to operate.

NOTE:

1. Only use the power adapter supplied with Internet camera Otherwise, the product may be damaged.
2. The power adapter is unnecessary when Internet camera is connected to a PoE switch. Otherwise, the product may be damaged when Internet camera is connected to a PoE switch and power adapter simultaneously.

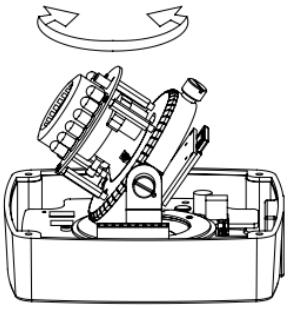
4. Attach BNC connector

Connect the video BNC connector to a monitor set if necessary check camera viewing angle and focus.

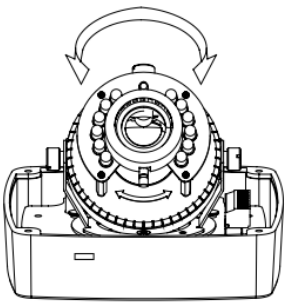
5. 3-Axis Gimbal Adjustments

Once the users open the case, the gimbal adjustment offers the convenience method to install on the wall. The pan, tilt, and rotation are provided in this model. The users can adjust the gimbal with Pan 175 degree, tilt 75 degree, and rotation 180 degree respectively.

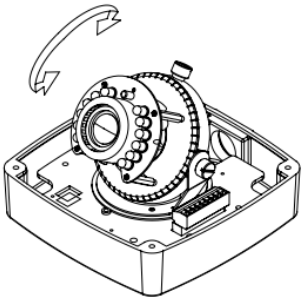
Pan: 175°



Rotation: 180°

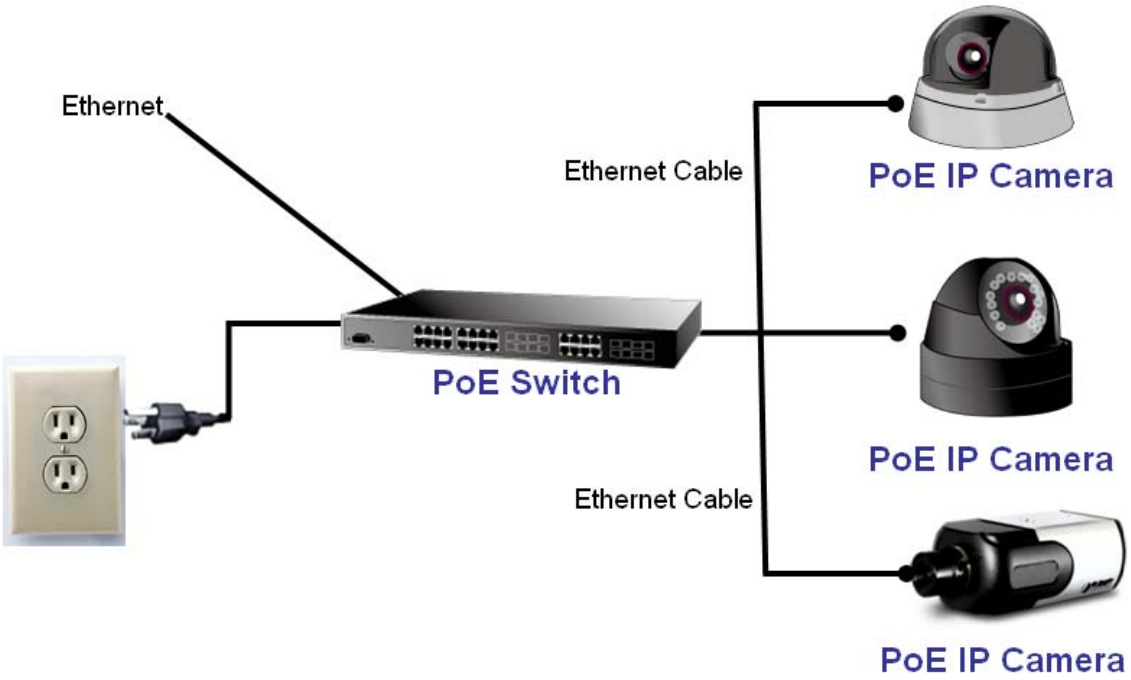


Tilt: 75°



6. PoE (Power Over Ethernet)

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that used for network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.



2.4 Initial Utility Installation

This chapter shows how to quick 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 IP Installer can search the cameras in the network that shall help you to configure some basic setting before you started 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 "PLANET IPInstaller" hyperlink; you will see the dialog box as below.

> **NOTE:** If the welcome screen does not appear, click "**Start**" at the taskbar. Then, select "**Run**" and type "**D:\Utility\PLANETIPinstaller\PLANETIPinstaller.exe**", assume D drive is your CD-ROM drive.

2.5 Initial Utility Installation

When you installed the camera on a LAN environment, you may execute PLANET IP Installer to discover camera's IP address and set up related parameters in the camera.

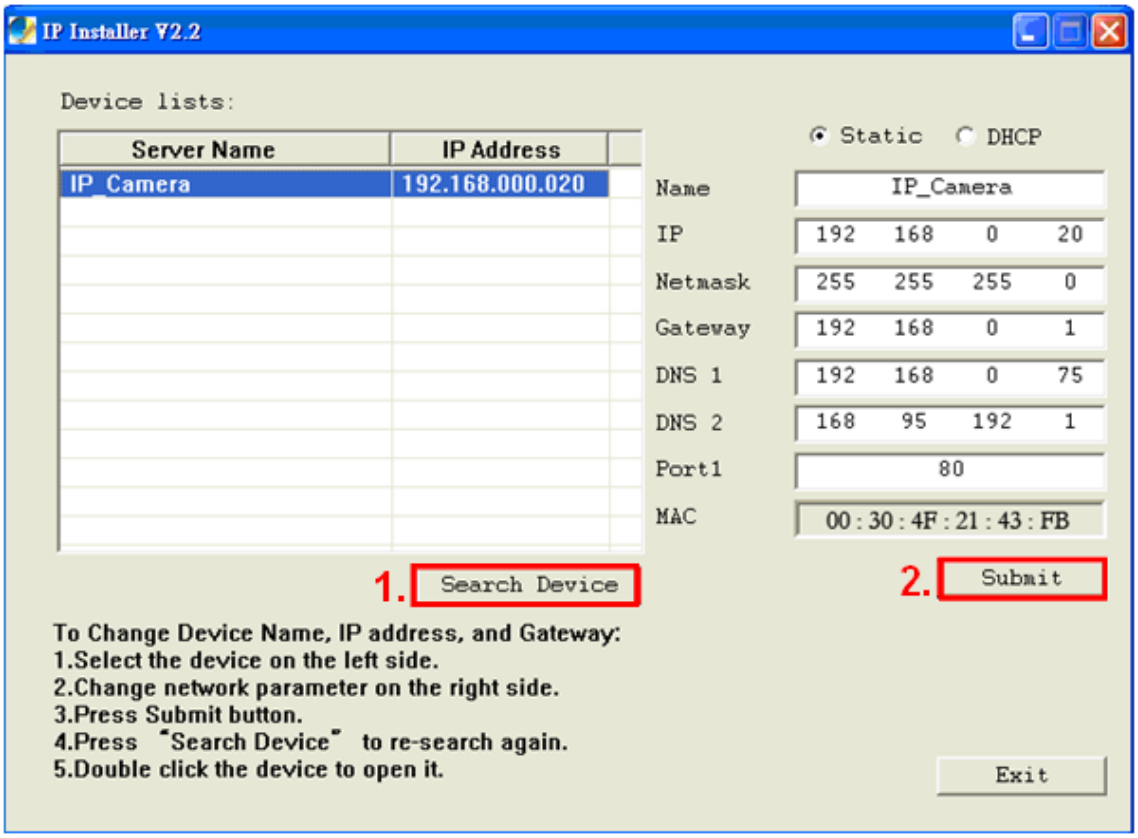
2.5.1 Search and Configure Network by PLANET IP Installer

When you installed the Camera on a LAN environment, you have two easy ways to search your Cameras by PLANET IP Installer or UPnP discovery. Here is the way to execute PLANET IP Installer to discover Camera's IP address and set up related parameter in a Camera.

Search and Configure Network

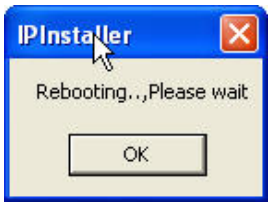
1. OS: Windows XP SP2 or above. If the following "**Windows Security Alert**" popup, please click "Unblock".

2. The GUI of IP Installer is as follows (Default IP: 192.168.0.20).



(1) IP Installer will search all IP Cameras connected on LAN. The user can click "**Search Device**" to search again.

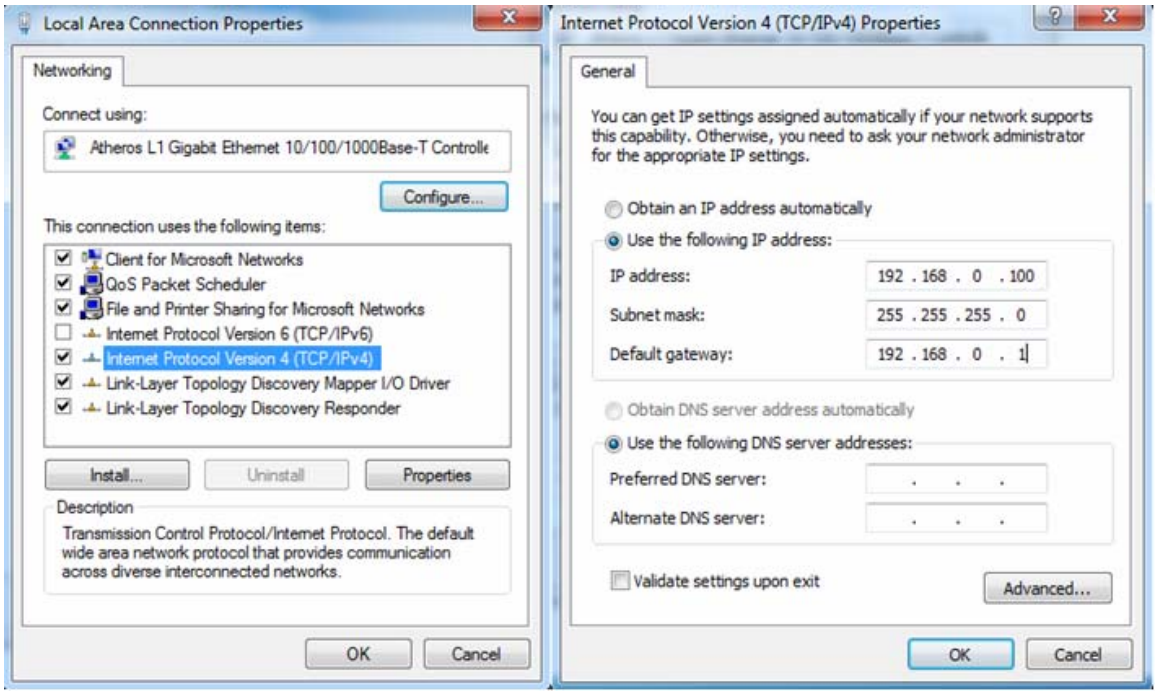
(2) Click one of IP Cameras listed on the left side of IP Installer, then the network configuration of that IP Camera will be listed on the right side. If parameters changed, click on "**Submit**". Then, the network configuration will be changed. Just click "**OK**" to reboot



(3) Please make sure the subnet of PC IP address and IP CAM IP address are the same.
IP CAM IP address: 192.168.0.20
PC IP address: 192.168.0.100

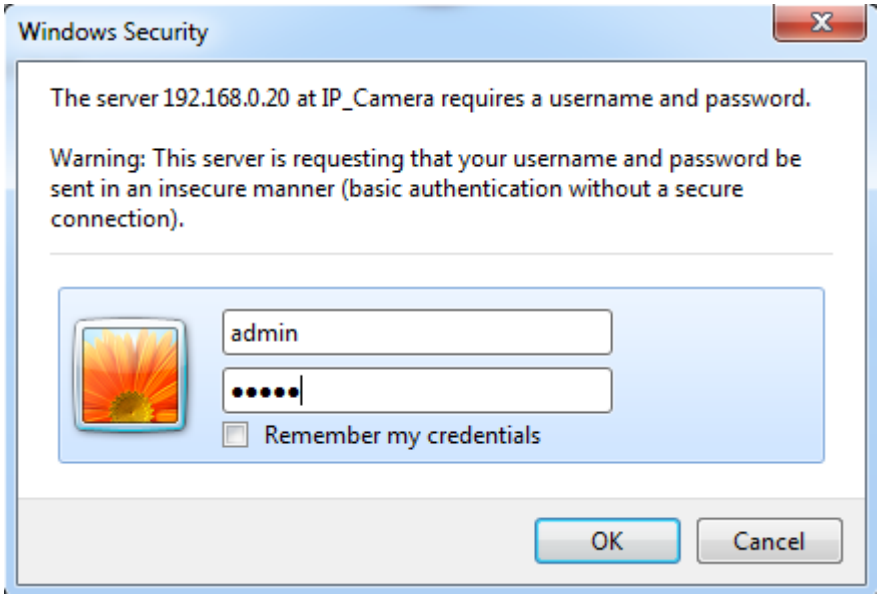
(4) Different Subnets:
IP CAM IP address: 192.168.0.20
PC IP address: 192.168.1.100

(5) To Change PC IP address:
Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties
Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera IP subnet or PC IP subnet accordingly.

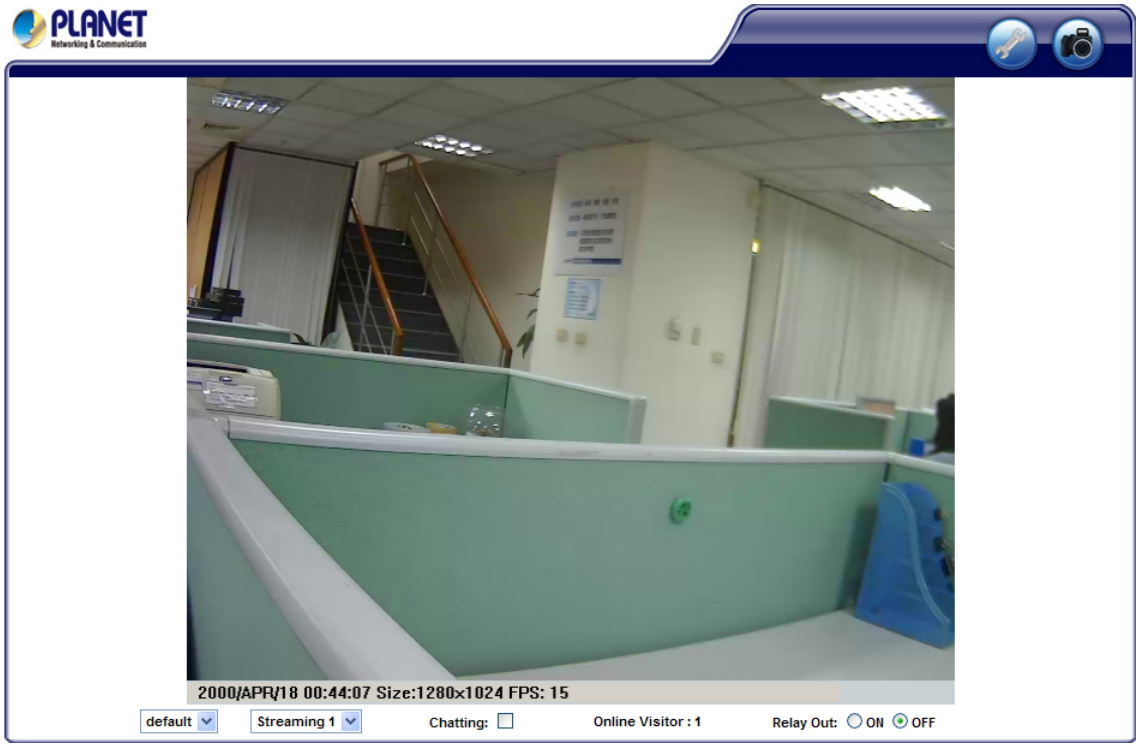


(6) A quick way to access remote monitoring is to left-click the mouse twice on a selected IP Camera listed on “Device list” of PLANET IP Installer. An IE browser will be opened.

(7) Then, please key in the default **“Username: admin**” and “**Password: admin**” in the following message box.



(8) If the user name and password are input correctly, the following web page will be displayed.



2.6 Setup ActiveX to use the Internet Camera

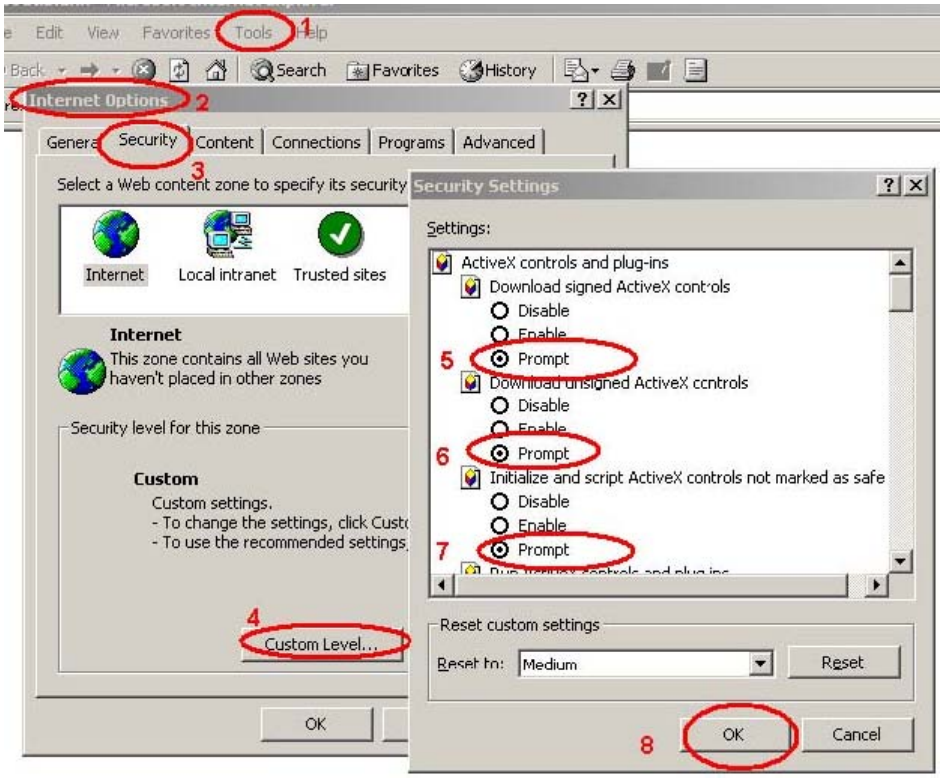
The Internet camera web pages communicate with the Internet camera using an ActiveX control. The ActiveX control must be downloaded from the Internet camera and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the Internet camera, user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

2.6.1 Internet Explorer 6 for Windows XP

From your IE browse ➔ "Tools" ➔ "Internet Options…" ➔ "Security" ➔"Custom Level…", please setup your "Settings" as follow.

Set 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*



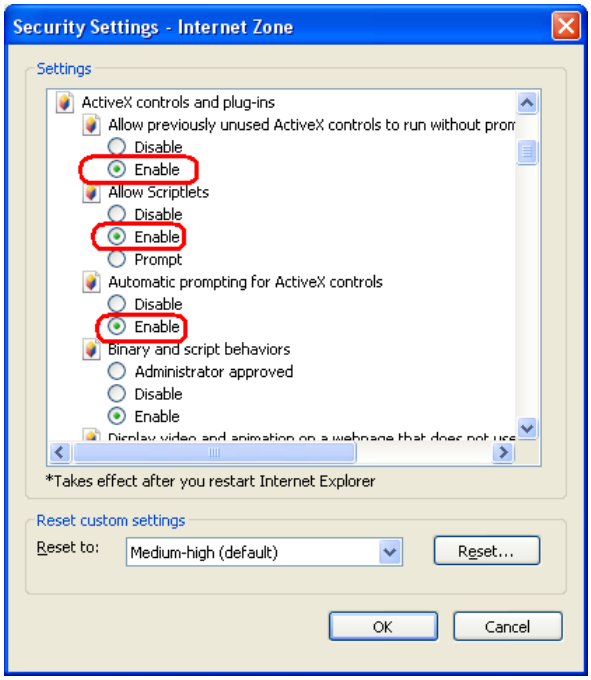
By now, you have finished your entire PC configuration for Internet camera.

2.6.2 Internet Explorer 7 for Windows XP

From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔”Custom Level…”, please setup your “Settings” as follow.

Set the first 3 items

- *Allow previously unused ActiveX control to run…*
- *Allows Script lets*
- *Automatic prompting for ActiveX controls*

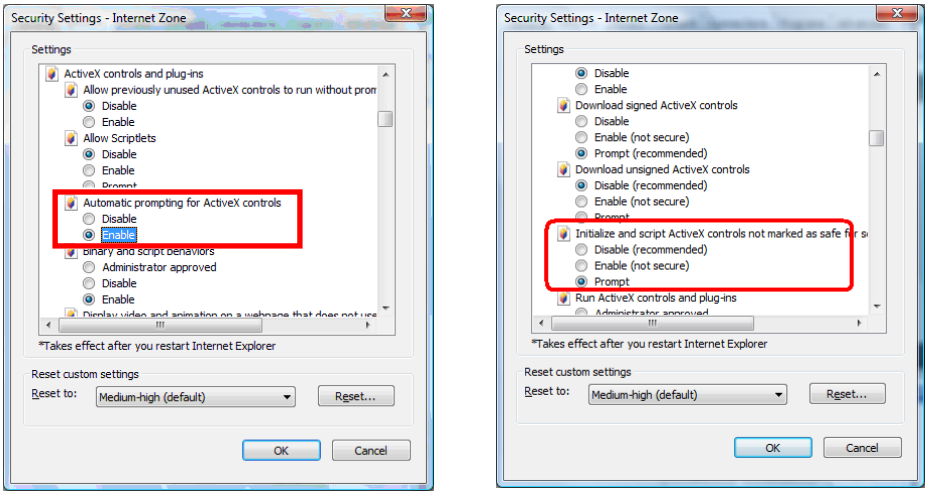


By now, you have finished your entire PC configuration for Internet camera.

2.6.3 Internet Explorer 7 for Windows Vista

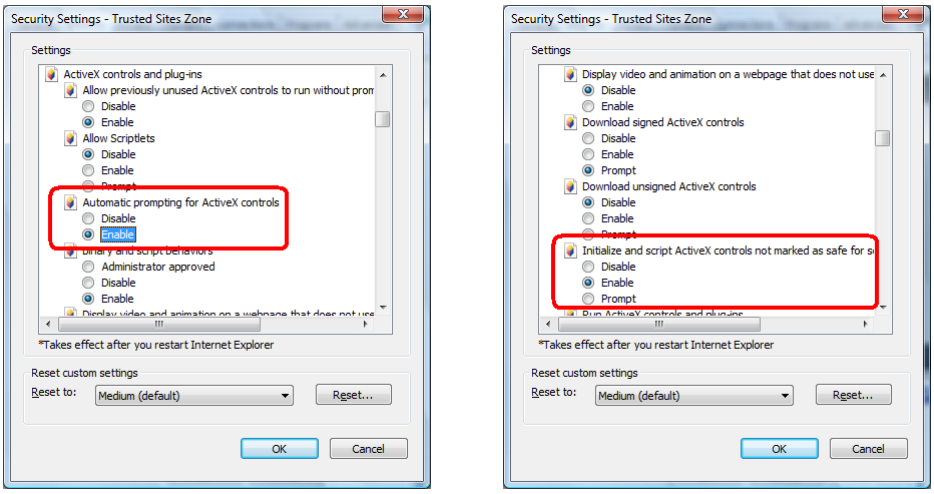
From your IE browse ➔ "Tools" ➔ "Internet Options…" ➔ "Security" ➔ "Internet" ➔"Custom Level…", please setup your "Settings" as follow.

- *Enable "Automatic prompting for ActiveX controls"*
- *Prompt "Initialize and script active controls not marked…."*



From your IE browse ➔ "Tools" ➔ "Internet Options…" ➔ "Security" ➔ "Trusted Sites" ➔"Custom Level…", please setup your "Settings" as follow.

- *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.

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 configure, please make sure your PC is under the same IP segment with Internet camera.

3.2 Connecting to Internet Camera

- Use the following procedure to establish a connection from your PC to the camera.
- Once connected, you can add the camera to your Browser's Favorites or Bookmarks.

Start the web browser on the computer and type the IP address of the camera. The Default IP: " http://192.168.0.20 "

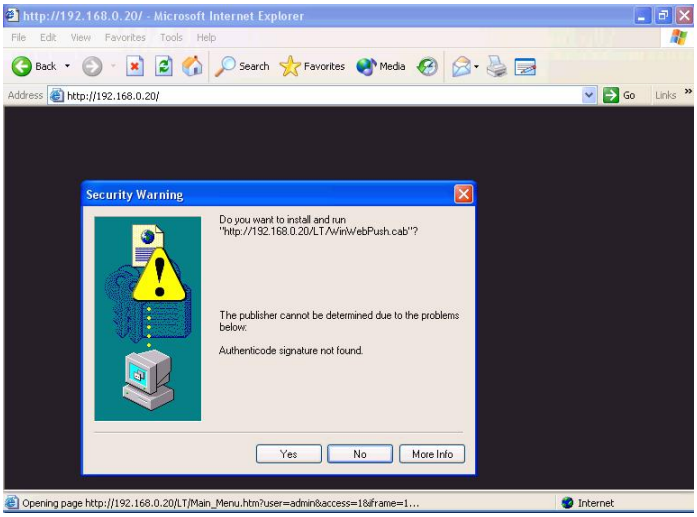
The login window of Internet camera will appear, Default login **username/password** is:

admin/ admin

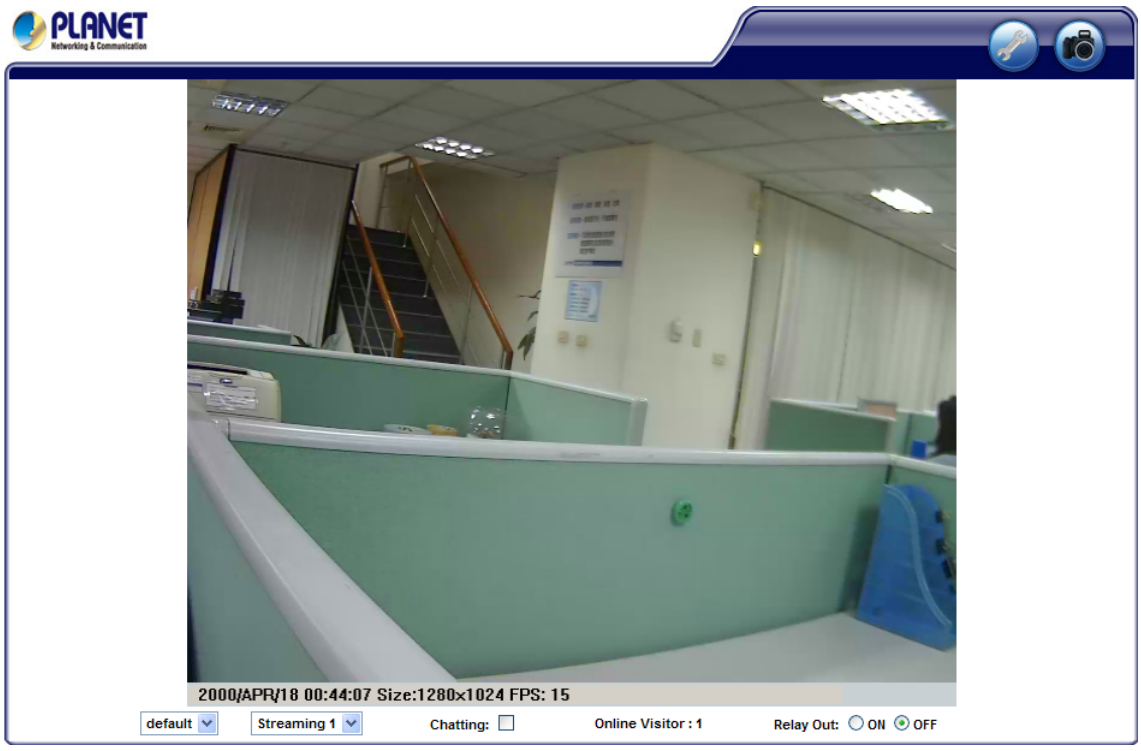
;

NOTE: If the User name and Password have been changed with PLANET IP Installer, please enter the new User name and Password here.

Web browser may display the “ **Security Warming**” window, select “**Yes**” to install and run the ActiveX control into your PC.



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



NOTE: 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.

4. Live View

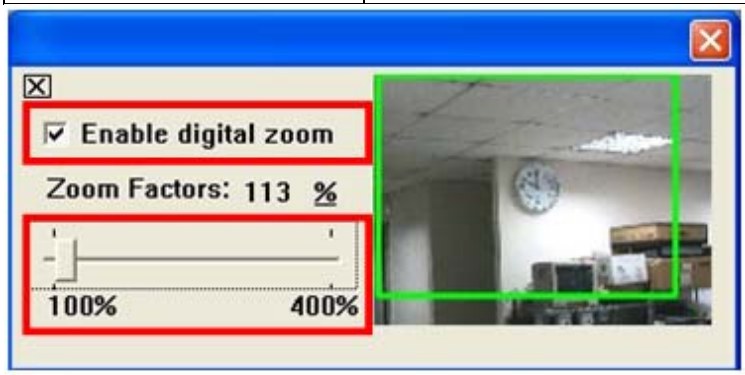
Start-up screen will be as follow no matter an ordinary users or an administrator.

(1)Configure	 Get into the administration page.
(2)Snapshot	 Video Snapshot
(3)Status Bar	Show system time, video resolution, and video refreshing rate.
(4)Screen Size	Select video scree n " **default, 1/2x, 1x, 2x**" for view currently camera screen size.
(5)Streaming Select	Select video strea ming source (When strea ming 2 setting in 『Video Setting』 is closed, this function will not display)
(6)Chatting Function	IP Camera suppo rts 2 -way audio. Click the " **Chatting**" ch eck box. Then you can use microphone which connects to the PC to talk to server side, which is IP Camera side

(7)Online Visitor	Shows how many people connect to this IP camera.
(8)Relay Control	Control the relay which is connected to this camera.

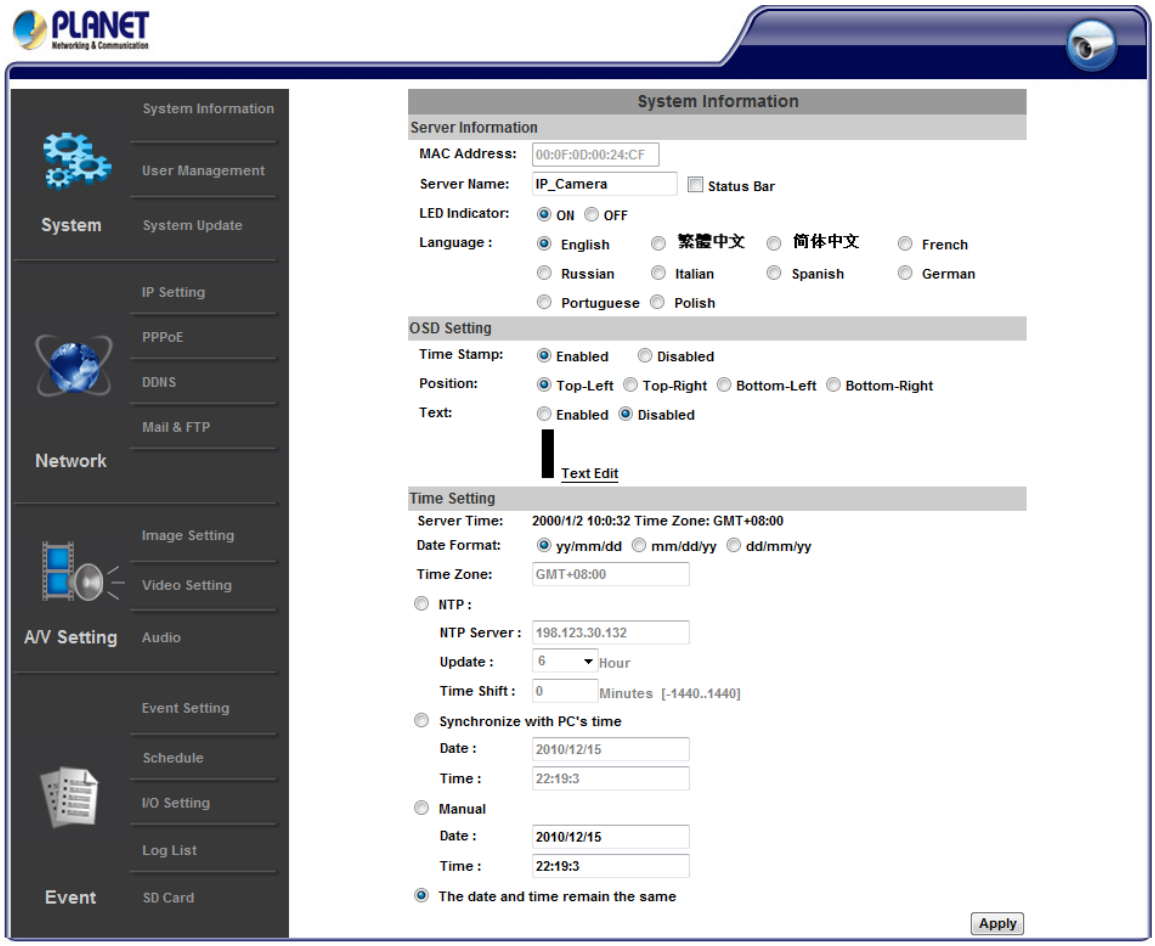
Double-click the video; it will change to full screen mode. Press "**Esc**" or double-click the video again, it will change back to normal mode. Right-Click the mouse on the video, it will show a pop-up menu.

(1)Snapshot	Save a JPEG picture.
(2)Record Start	Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select "**Record Stop**". The video format is AVI. Use Microsoft Media Player to play the recorded file.
(3)Mute	Turn of the audio. Click again to turn on it.
(4)Full Screen	Full-screen mode.
(5)ZOOM	Enable zoom-in and zoom-out functions. Select "**Enable digital zoom**" option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



5. Configuration

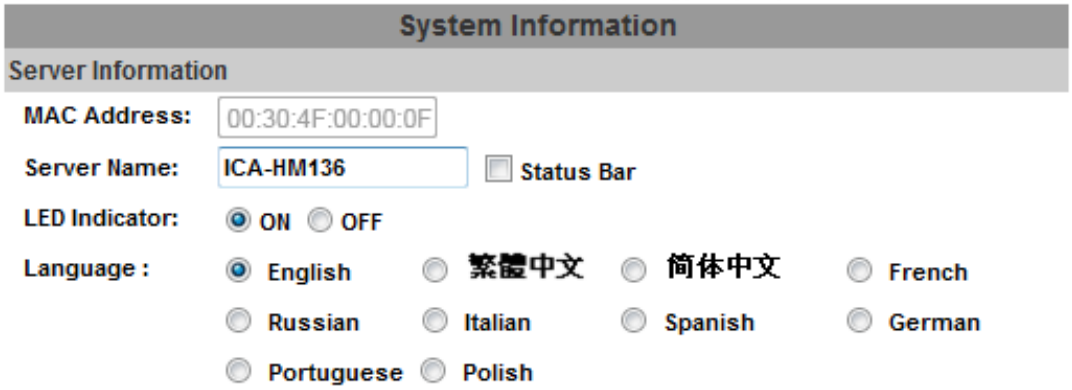
Click  to get into the administration page. Click  to go back to the live video page.



5.1 System

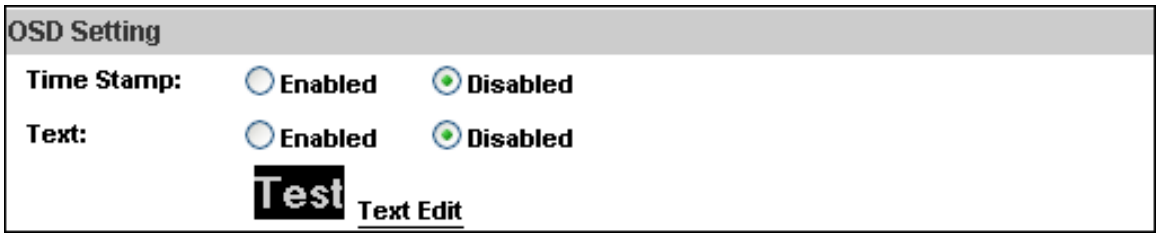
5.1.1 System Information

1. Server Information: Set up the camera name, select language, and set up the camera time.

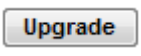


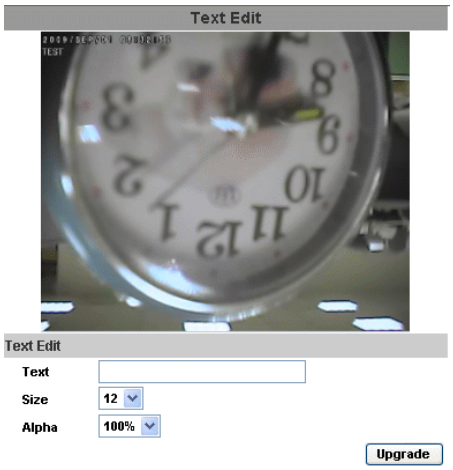
Server Name	This is the Camera name. This name will show on the IP Installer.
Select language	There are English, Traditional Chinese, Simplified Chinese, French, Russian, Italian, Spanish, German, Portuguese and Polish to select. When change, it will show the following dialogue box for the confirmation of changing language.

2. OSD Setting: Select a position where date & time stamp / text showing on screen.

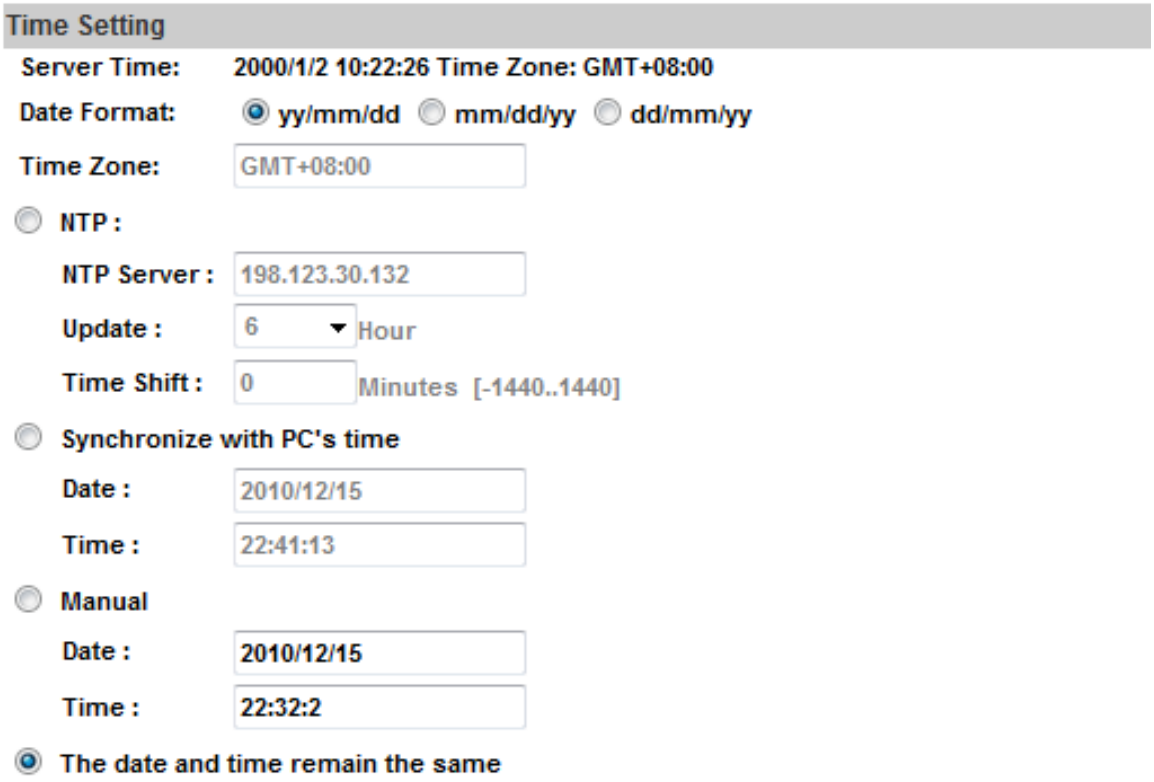


Moreover, click Text Edit can entry to adjust the OSD contents which is including Size and Alpha of text.

Finally, click  button to reserve the setting.

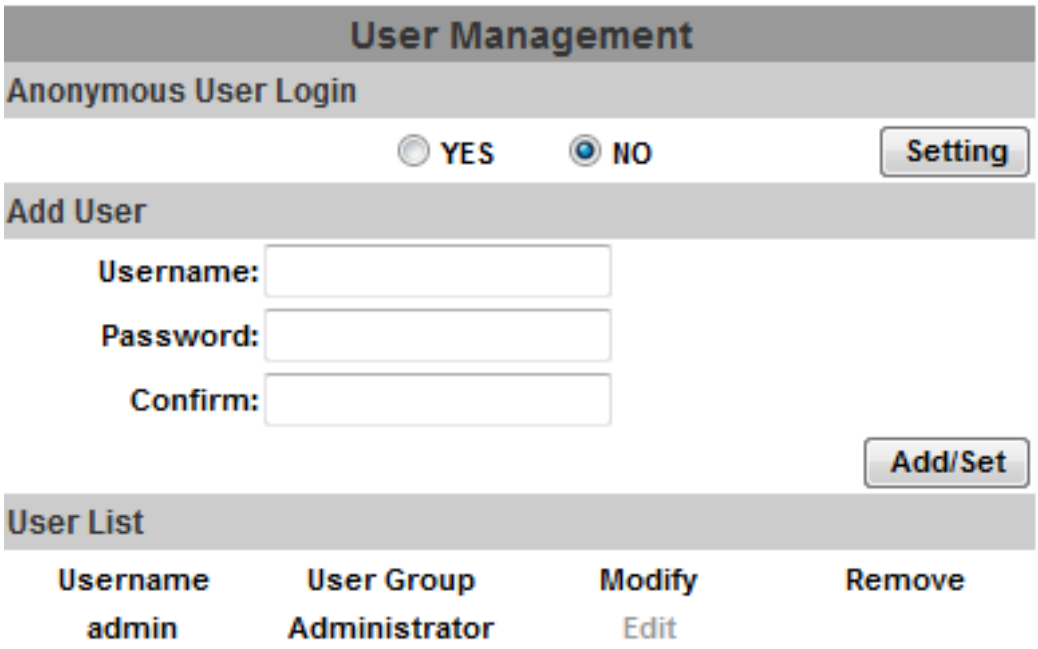


3. Server time s etting：Select option s to set up time - " **NTP**", "**Synchronize with PC's time**", "**Manual**", "**The date and time remain the same**".



5.1.2 User Management

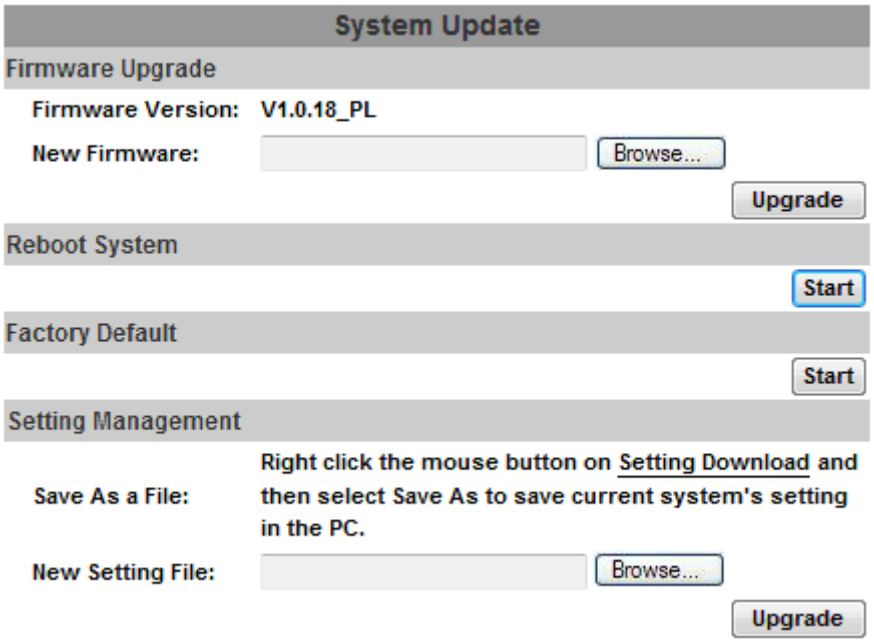
IP CAMERA supports three different users, administrator, general user, and anonymous user.



Anonymous User Login	Yes：Allow anonymous login No：Need user name & password to access this IP camera
Add user	Type the user name and password, then click “**Add/Set**”.

Click “**edit**” or “delete” to modify the user

5.1.3 System Update



Firmware Upgrade	To update th e firmwa re o nline, cli ck "**Browse…**" t o sele ct t he firmware. Then click "Upgrade" to proceed.
Reboot System	Re-start the IP camera.
Factory default	Delete all the settings in this IP camera.
Setting Management	User may do wnload the current setting to PC, or upgrad e from previous saved setting.

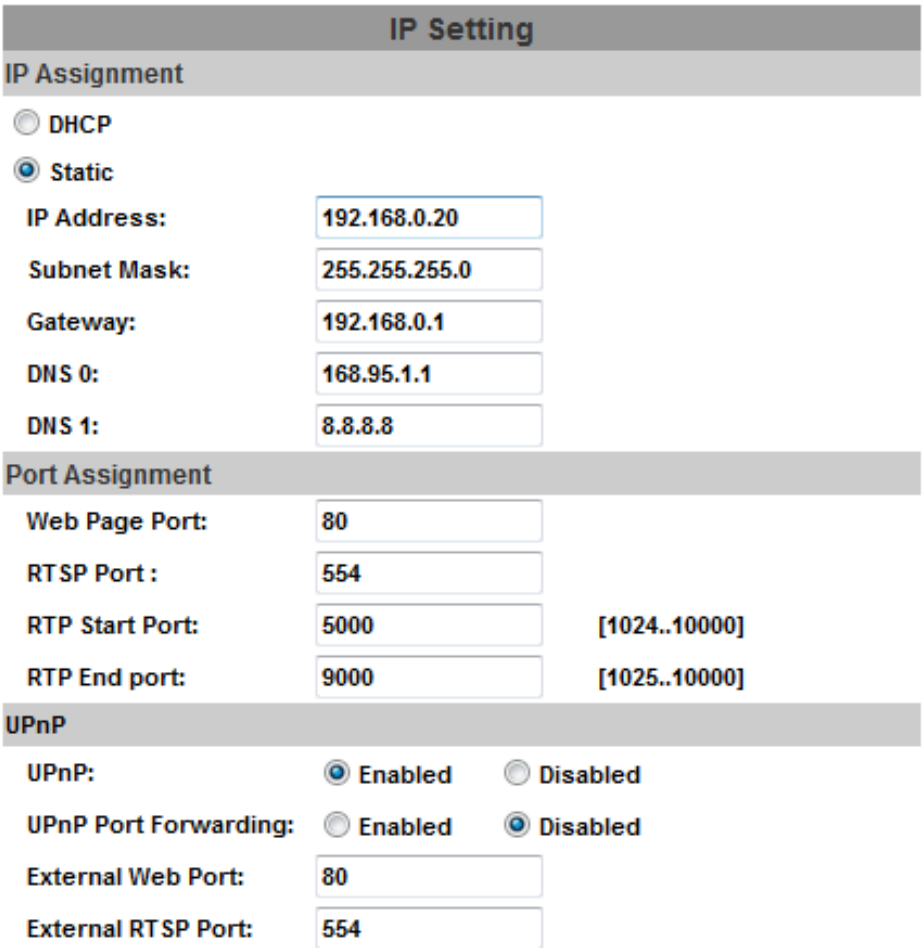
Setting download:
Right-click the mouse button on Setting Download → Select "**Save AS…**" to save current IP CAM setting in PC → Select saving directory → Save

Upgrade from previous setting:
Browse → search previous setting → open → upgrade → Setting update confirm → click index.html. to return to main page

5.2 Network

5.2.1 IP Setting

IP Camera supports DHCP and static IP.



DHCP	Using DHCP, IP Camera will get all the network parameters automatically.
Static IP	Please type in IP addre ss, sub net m ask, gateway, and DNS manually.
Port Assignment	User may need to assign different port to avoid conflict whe n setting up IP assignment. (1) Web Page Port: setup web page connecting port and video transmitting port (Default: 80) (2) RTSP Port: setup port for RTSP transmitting (Default: 554) (3) RTP Start and End Port: in RTSP mode, you may use TCP and UDP for con necting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

UPnP	This IP camera supports UPnP, If this service is enabled on your computer, the camera will autom atically be detected and a new icon will be added to “My Network Places.” Note: UPnP must be enabled on your computer.

Please follow the procedure to activate UPnP

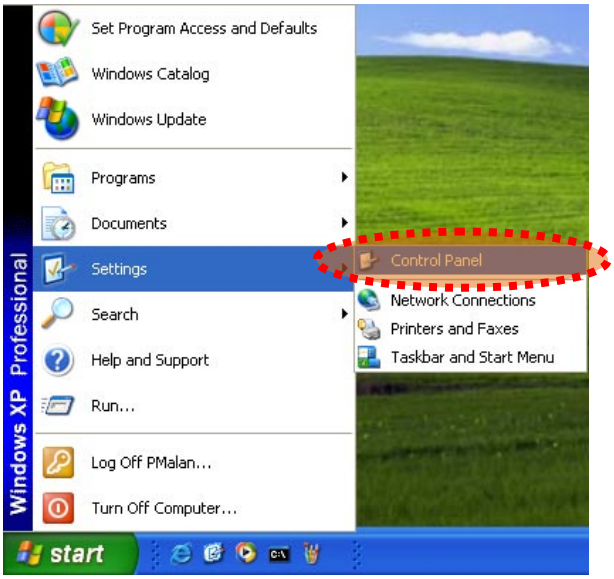
5.2.2 Using UPnP of Windows XP or Vista

5.2.2.1 Windows XP

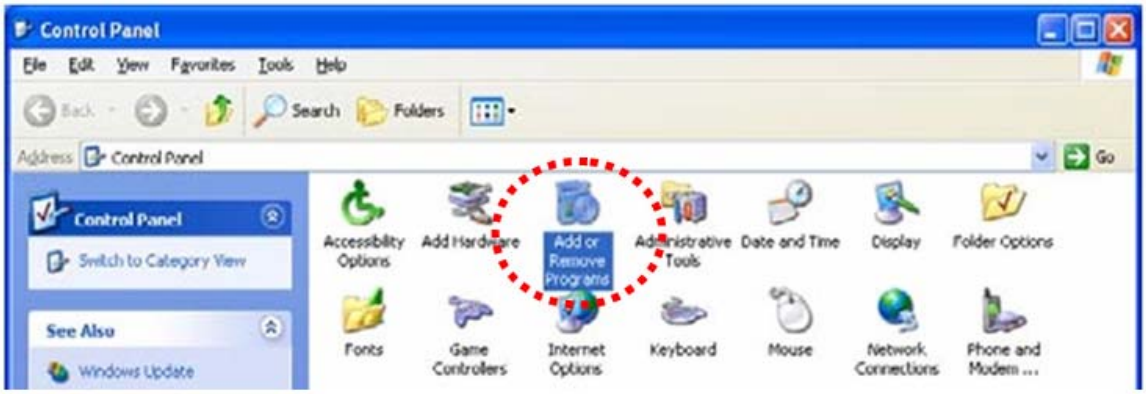
UPnP™ is short for Universal Plug a nd Play, whi ch is a n etworking a rchitecture that p rovides compatibility among network ing equipment, software, and perip herals. Thi s device i s an UPnP enabled device. If the operating system, Windows XP, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows XP.

NOTE: Windows 2000 does not support UPnP feature.

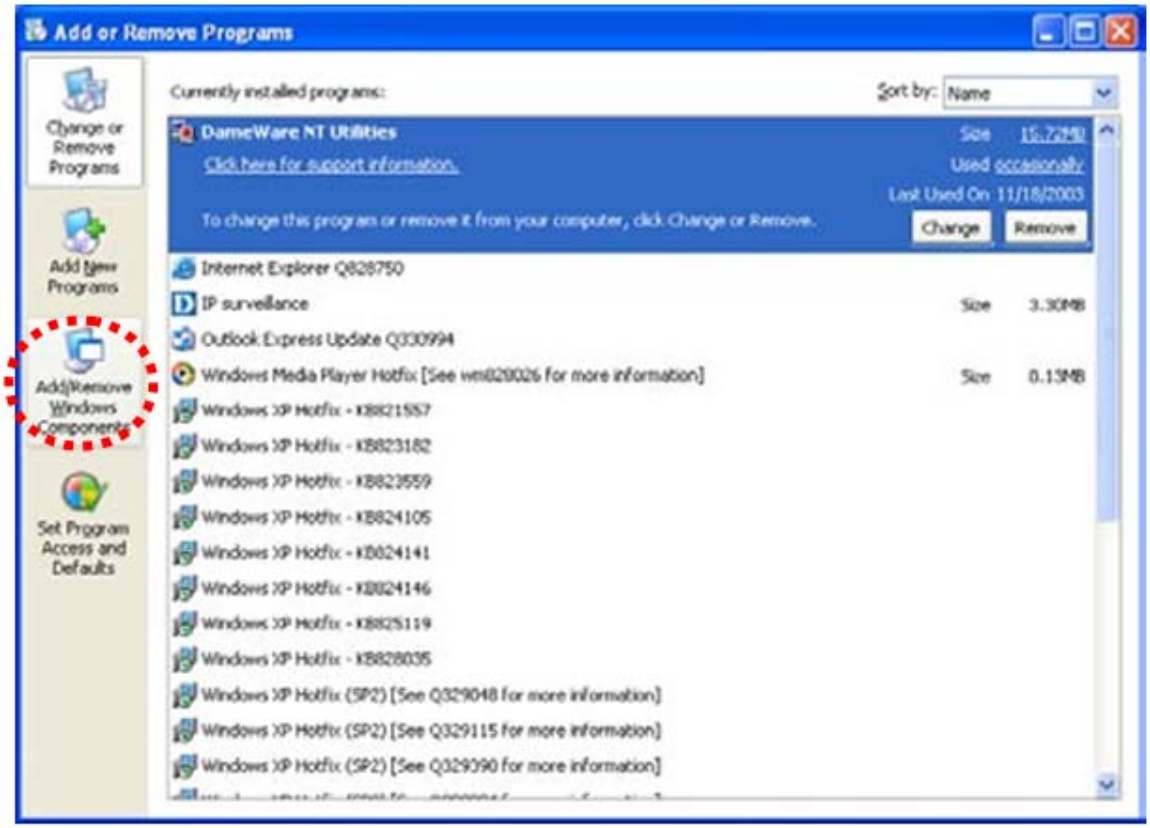
Go to **Start > Settings**, and Click Control Panel



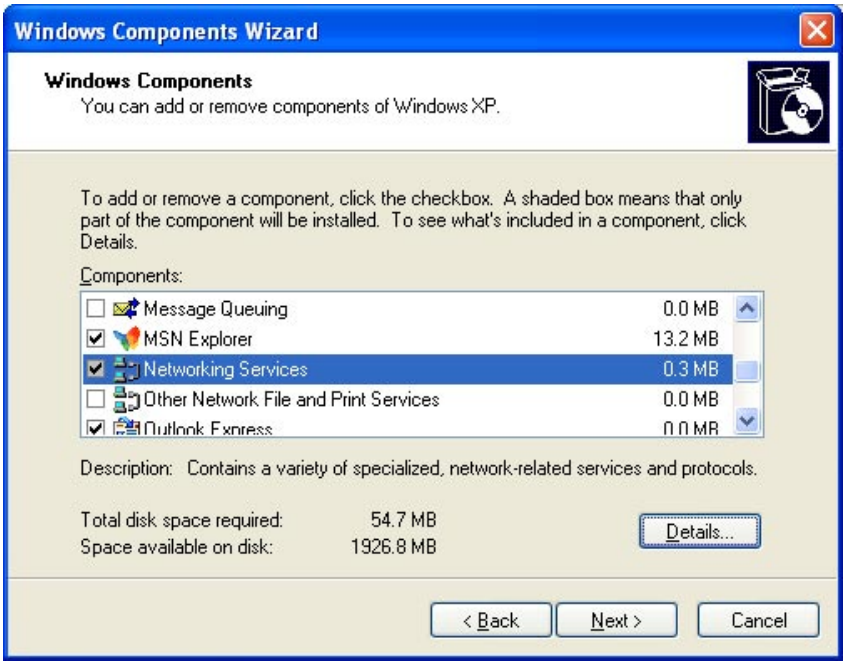
The “**Control Panel**” will display on the sc reen and double click “**Add or Remove Programs**” to continue



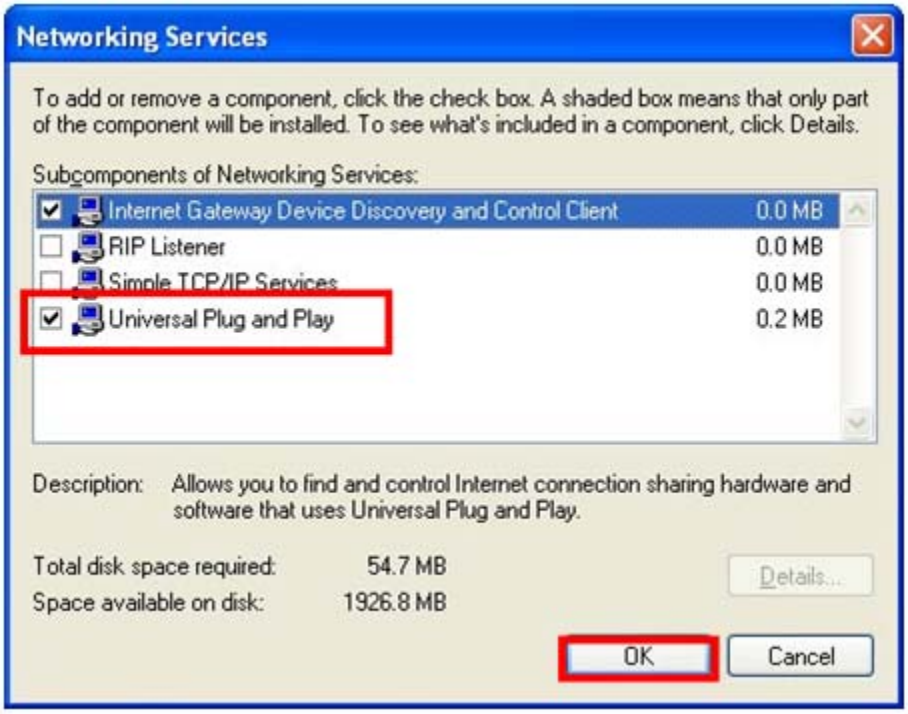
The “Add or Remove Programs” will display on the screen and click **Add/Remove Widows Components** to continue.



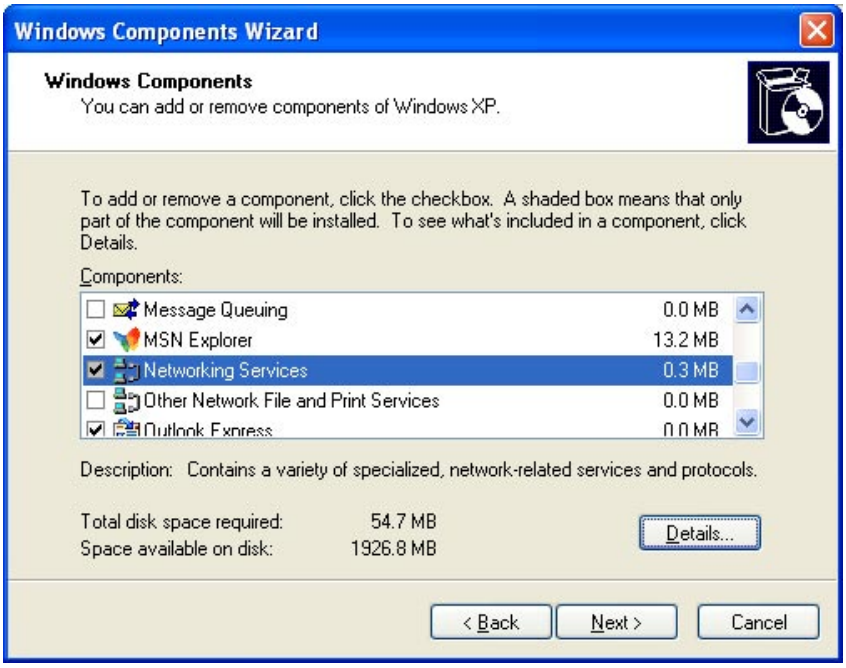
The following screen will appear, select "**Networking Services**" and click "**Details**" to continue



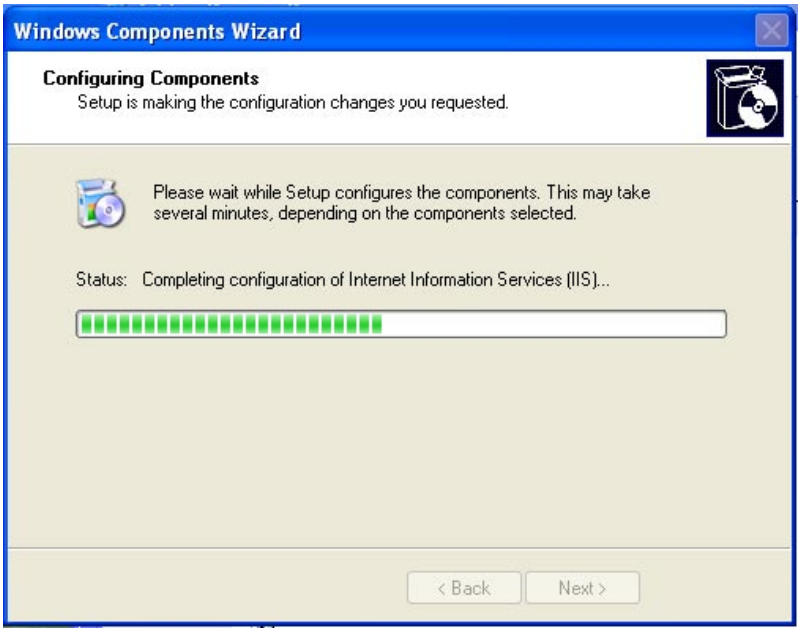
The "**Networking Services**" will display on the screen, select "**Universal Plug and Play**" and click "**OK**" to continue.



Please click “**Next**” to continue

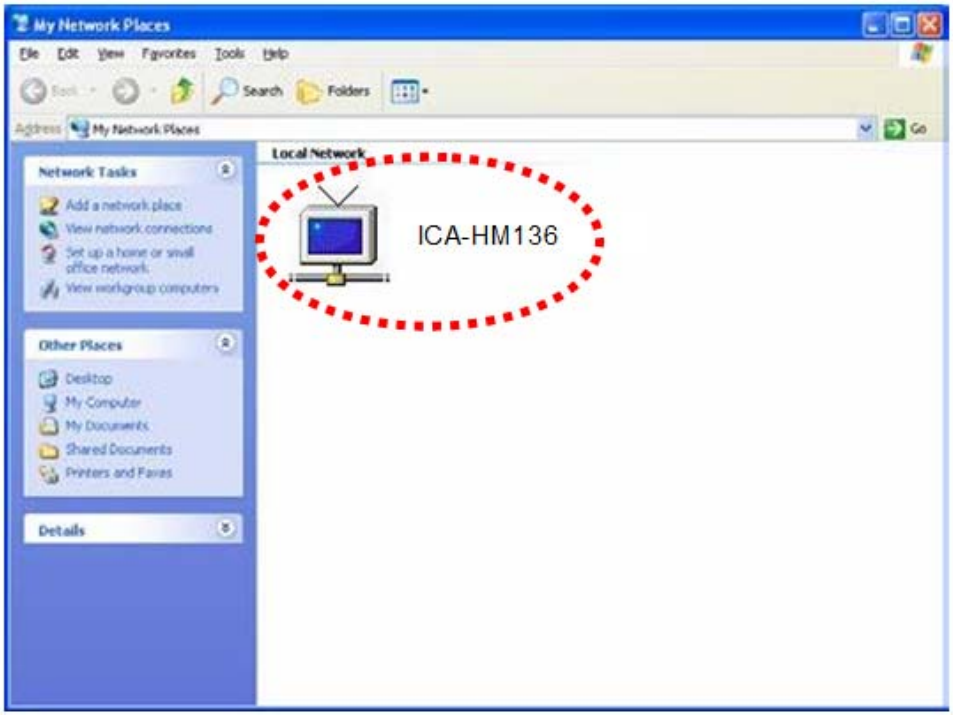


The program will start inst alling the UPnP automatically. You w ill see the below pop-up screen, please wait while Setup configures the components.



Please click “**Finish**” to complete the UPnP installation

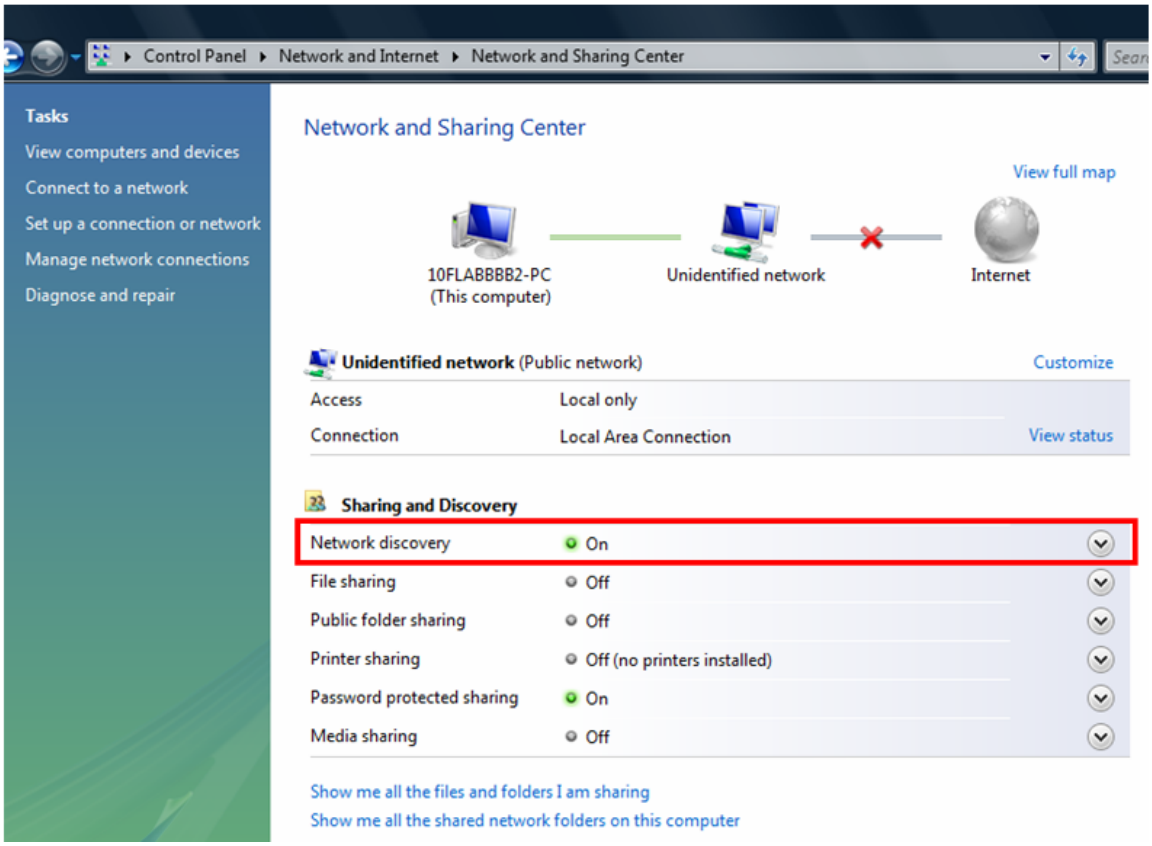
Double-click “**My Network Places**” on the desktop, the “**My Network Places**” will display on the screen and double-click the UPnP icon with Internet camera to view your device in an Internet browser.



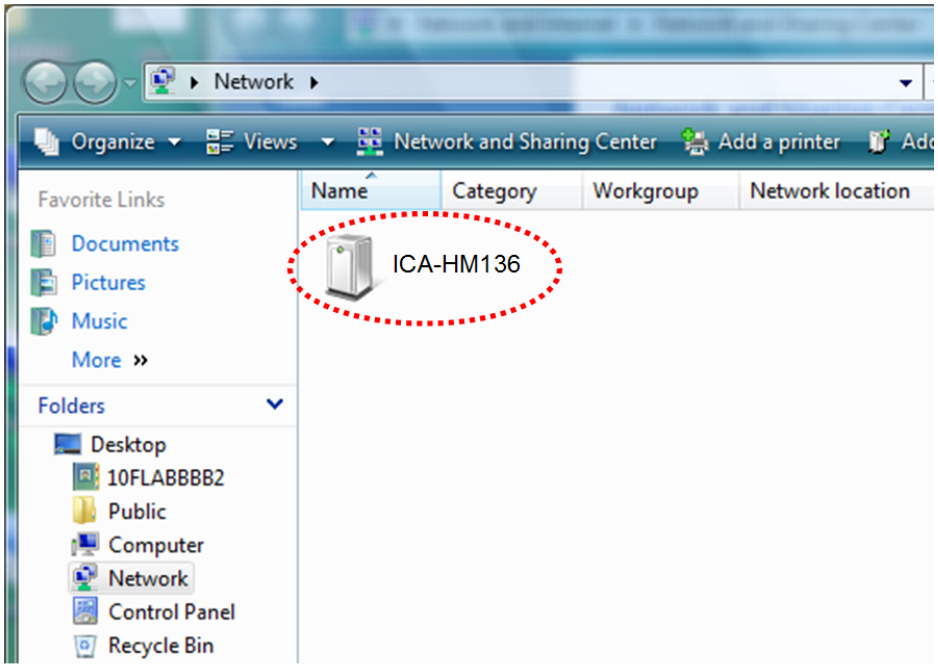
5.2.2.2 Windows Vista

UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among network ing equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows Vista, 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 Vista.

Go to **Start > Control Panel > Network and Internet > Network and Sharing Center,** and turn on "**Network Discovery**".



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



5.2.3 PPPoE

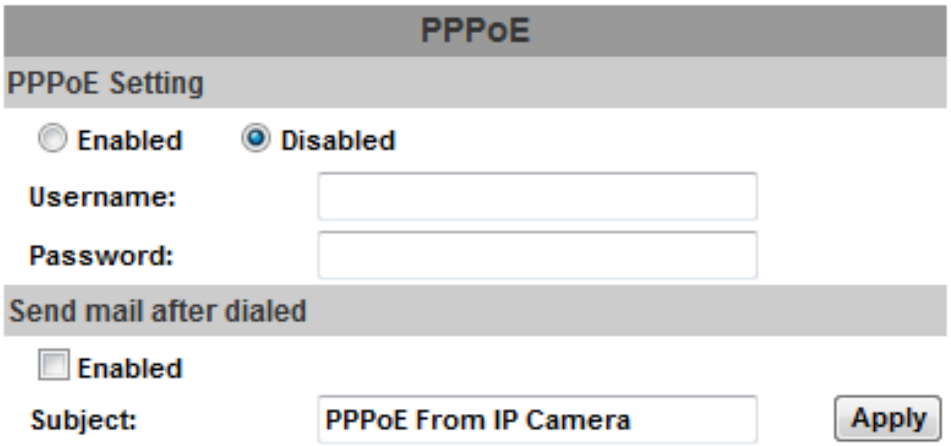
PPPoE: Stands for Point to Point Protocol over Ethernet

A st andard b uilds on Eth ernet an d Point-to-Poi nt network p rotocol. It allows Internet ca mera connect to Internet with xDSL or cable conn ection; it can dial up your ISP and get a dynamic IP address. For more PPPoE and Internet configuration, please consult your ISP.

It can directly connect to the xDSL, however, it should be setup on a LAN environment to program the PPPoE information first, and then connect to the xDSL modem. Power on again, then the device will dial on to the ISP connect to the WAN through the xDSL modem.

The procedures are:

(1) Select "**Enabled**" to use PPPoE.
(2) Key-in Username and password for the ADSL connection.
(3) Send mail after dialed：When connect to the Internet, it will send a mail to a specific mail account. For the mail setting, please refer to "**Mail and FTP**" settings.



5.2.4 DDNS

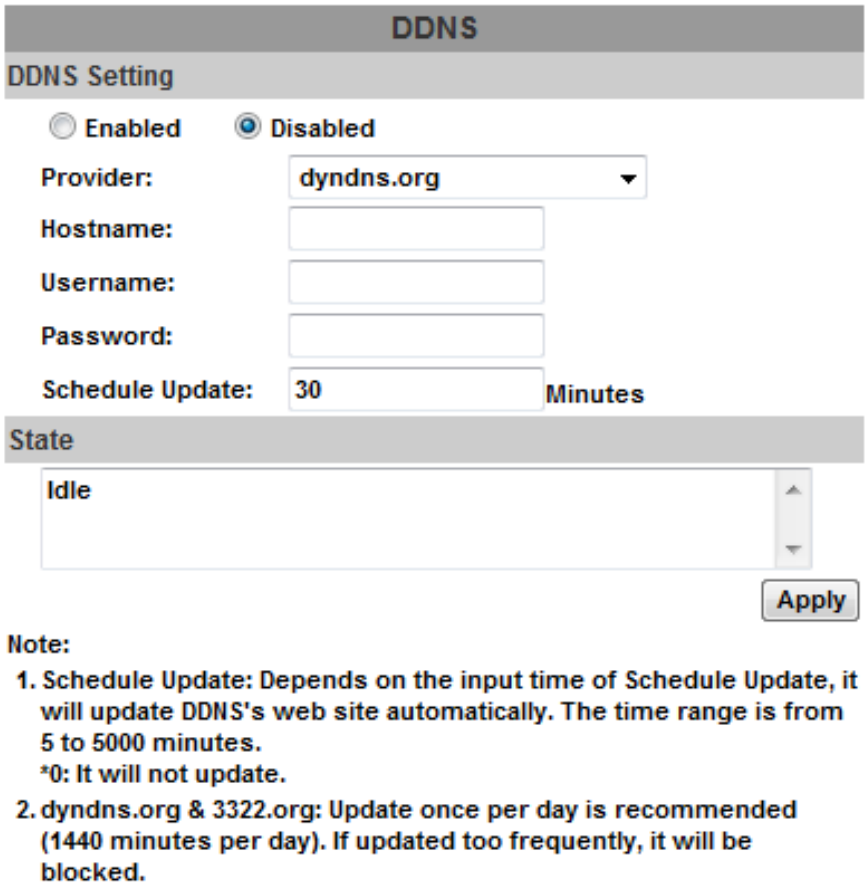
DDNS: Stands for Dynamic Domain Name Server

The device supports DDNS If your device is co nnected to xDSL directly, you might need this feature. However, if y our device is behind a NAT router, y ou will not need to enable this feature. Because DDNS allows the device to use an easier way to remember naming format rather than an IP address. The name of the domain i s like the name of a person, and the IP addre ss is like his phone number. On the Internet we h ave IP numbers for each ho st (computer, server, router, and so on), and we replace these IP numbers to easy remember names, which are organized into the domain name. As to xDSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP serve r, then the Dynamic Domain Name Server is necessary. For more DDNS configuration, please consult your dealer.

Your Intern et Service Pro vider (ISP) p rovides you at least one IP addre ss which you u se to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it's likely to chan ge perio dically. Ju st how often it changes, dep ends on your ISP. A dynamic IP address complicates remote access since you may not know what your current WAN

IP address is when you want to access your network over the Internet. The solution to the dynamic IP address problem comes in the form of a dynamic DNS service.

The Internet uses DNS servers to lookup domain names and translates them into IP addresses. Domain names are just easy to remember aliases for IP addresses. A dynamic DNS service is unique because it provides a means of updating your IP address so that your listing will remain current when your IP address changes. There are several excellent DDNS services available on the Internet and best of all they're free to use. One such service you can use is www.DynDNS.org. You'll need to register with the service and set up the domain name of your choice to begin using it. Please refer to the home page of the service for detailed instructions or refer to Appendix E for more information.

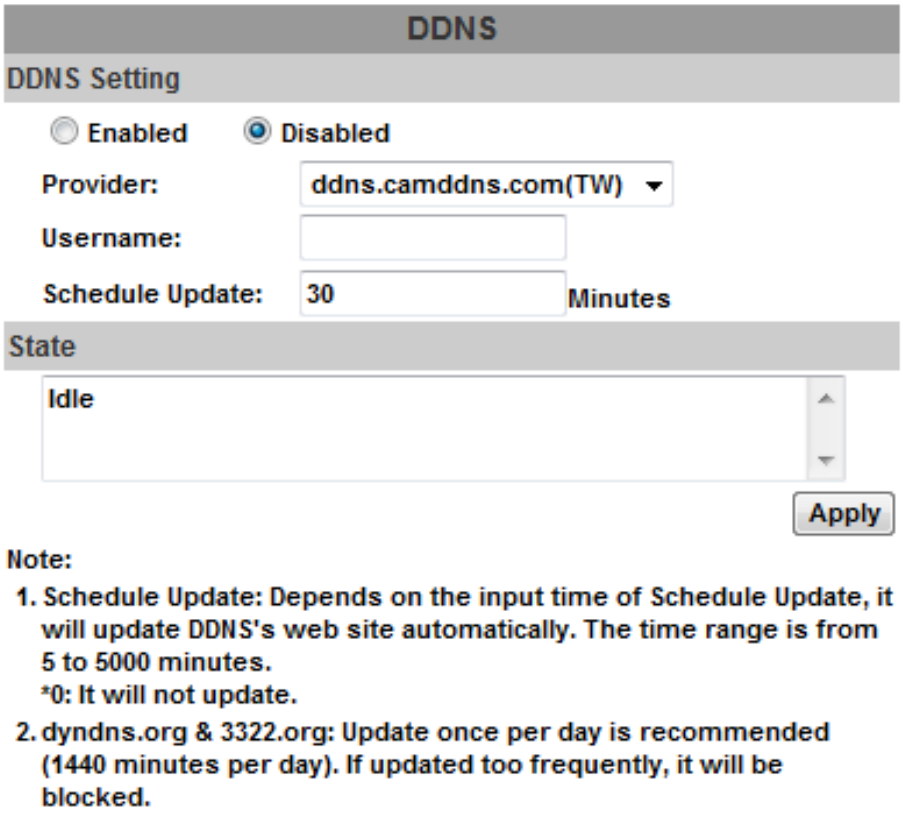


DynDns.org, the procedures are:

(1) Enable this service
(2) Key-in the DynDNS server name, user name, and password.
(3) Set up the IP Schedule update refreshing rate.
(4) Click "**Apply**"
(5) If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

Camddns, the procedures are:

(1) Please enable this service
(2) Key-in user name.
(3) IP Schedule update is default at 5 minutes
(4) Click “**Apply**”.

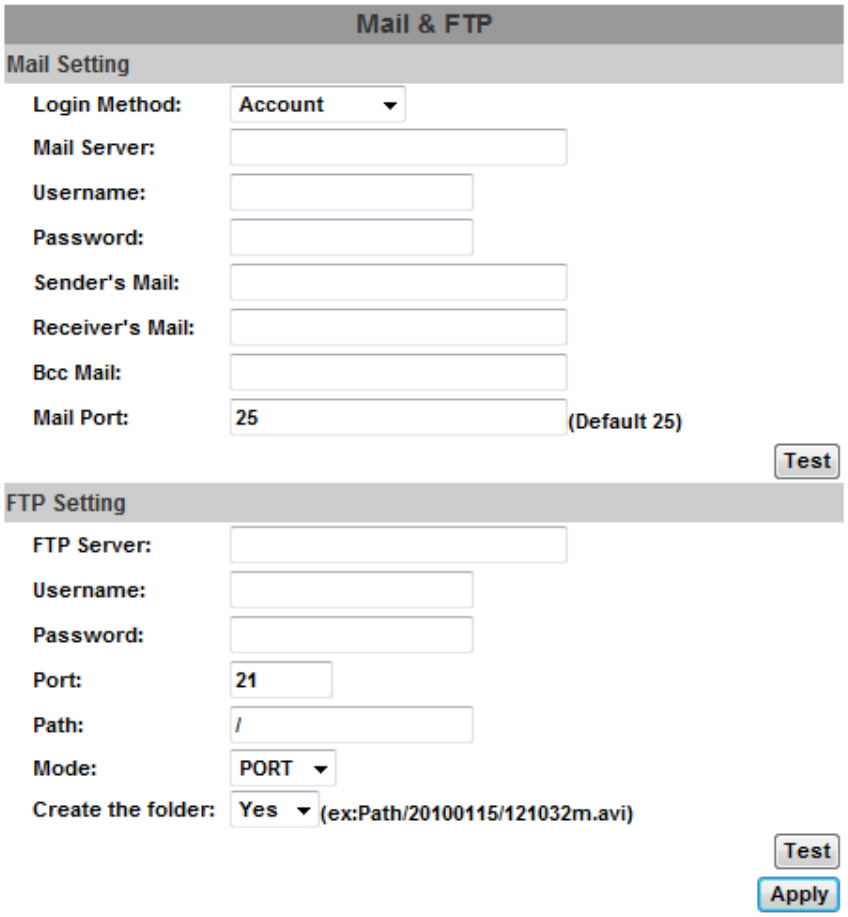


DDNS Status

(1) Updating：Information update
(2) Idle：Stop service
(3) DDNS registration successful, can now log by http://<username>.ddns.camddns.com：Register successfully.
(4) Update Failed, the name is already registered：The user name has already been used. Please change it.
(5) Update Failed, please check your Internet connection：Network connection failed.
(6) Update Failed, please check the account information you provide：The server, user name, and password may be wrong.

5.2.5 Mail & FTP

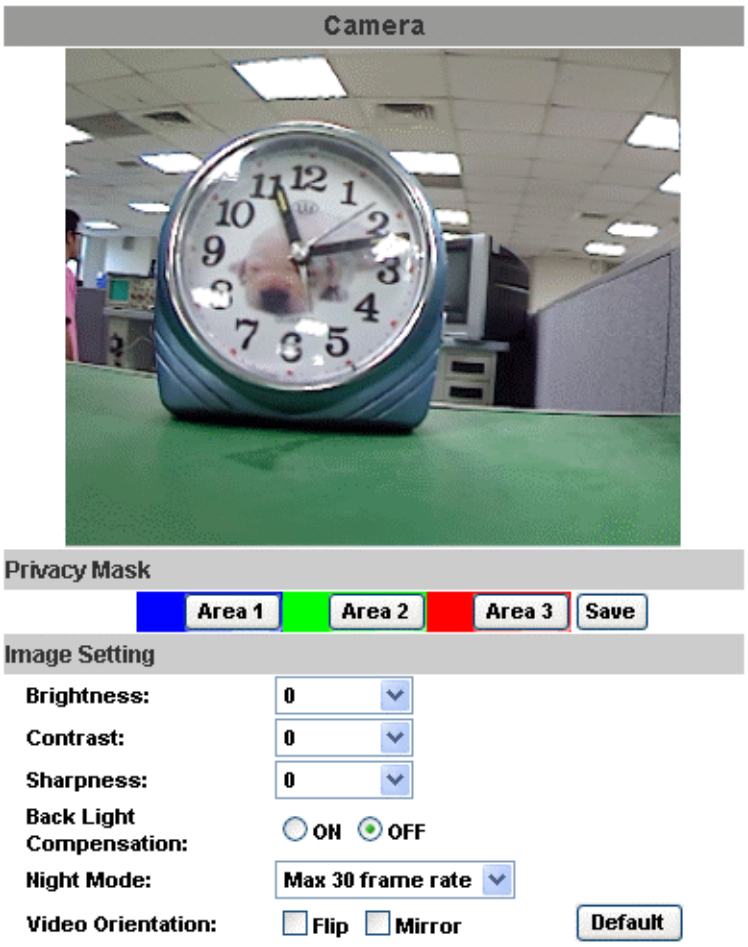
To send out the video via mail of ftp, please set up the configuration first.



5.3 A/V Setting

5.3.1 Image Setting

For the security purpose, there are three areas can be setup for privacy mask. Click "**Area**" button first and pull an area on the above image. Finally, click "**Save**" button to reserve the setting. Adjust "**Brightness**", " **Contrast**", " **Hue**", " **Saturation**" to get clear vide o. Moreover, the ICA-HM136I supports "**Back Light Compensation(BLC)**", "**Night Mode**" and "**Video Orientation**".



5.3.2 Video Setting

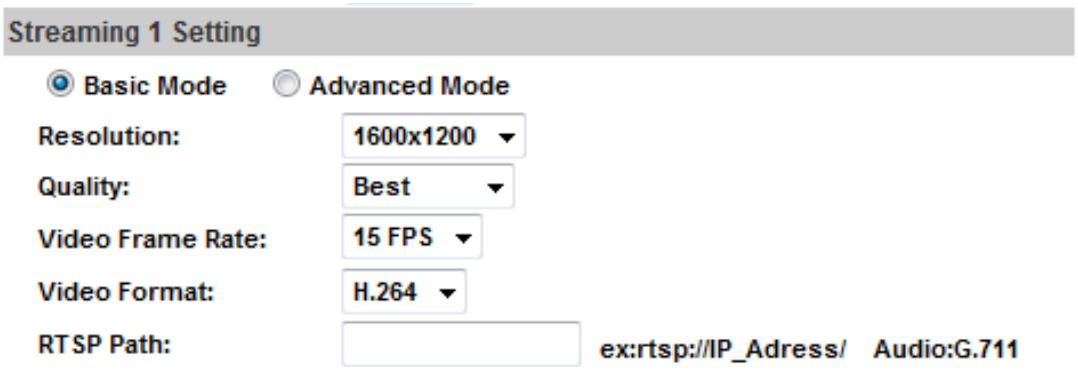
User may select 2 streaming output simultaneously:

Streaming 1 Setting	Basic mode and Advanced mode.
Streaming 2 Setting	Basic mode, Advanced mode, and 3GPP mode

NOTE: Max Video Frame Rate for both streaming combined is 30 FPS.

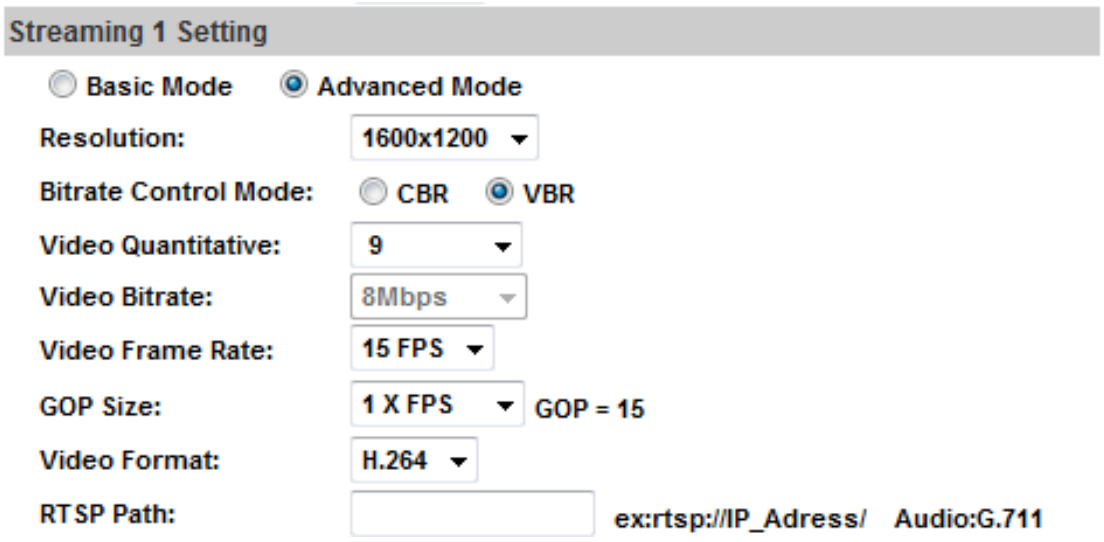
Video System: click the drop down list to select the system type "**NTSC/PAL**".

Streaming 1 and 2Basic Mode:



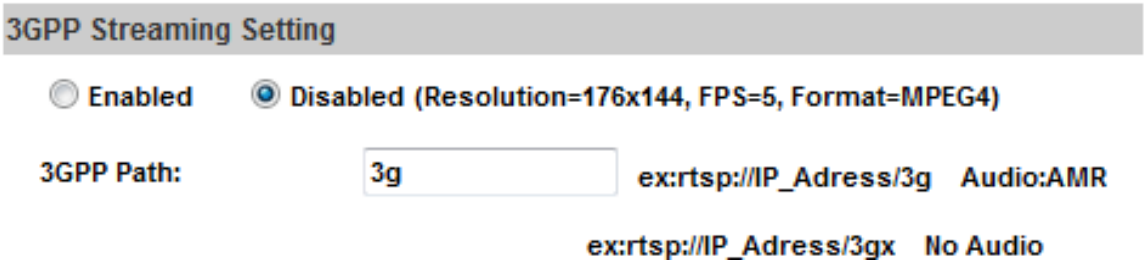
Resolution	There are 8 resolutions can be chosen. 1600x 12 00, 1280x10 24, 1280x 960, 1280x72 0, 800x600, 640x480, 320x240, 176x144
Quality	There are 5 levels to adjust: Best/ High/ Standard/ Medium/ Low The higher the quality is, the bigger the file size is. Also not good for Internet transmitting
Video Frame Rate	The video refreshing rate per second.
Video Format	H.264 or JPEG.
RTSP Path	RTSP output name.

Streaming 1 and 2 Advanced Mode：



Resolution	There are 8 resolutions can be chosen. 1600x 12 00, 1280x10 24, 1280x 960, 1280x72 0, 800x600, 640x480, 320x240, 176x144
Bitrate Control Mode	There are CBR〔Constant Bit Rate〕 and VBR〔Variable Bit Rate〕to use. **CBR**：32Kbps~4Mbps (the higher the CBR is, the better the video quality is) **VBR**：1(Low) ~10(High) – Compression rate, the higher the compression rate, the lower the picture quality is; vise versa. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.
Video Frame Rate	The video refreshing rate per second.
GOP Size	It means "**Group of Pictures**". The higher the GOP is, the better the quality is.
Video Format	H.264 or JPEG.
RTSP Path	RTSP output name.

3GPP Streaming mode:



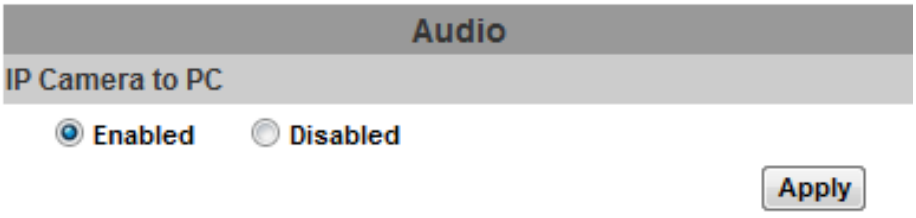
Enable or Disable	Enable or Disable 3GPP Streaming.
3GPP Path	3GPP output name.

NOTE: 3GPP mode suggested setting: 176x144 resolutions, 5FPS, MPEG4 format.

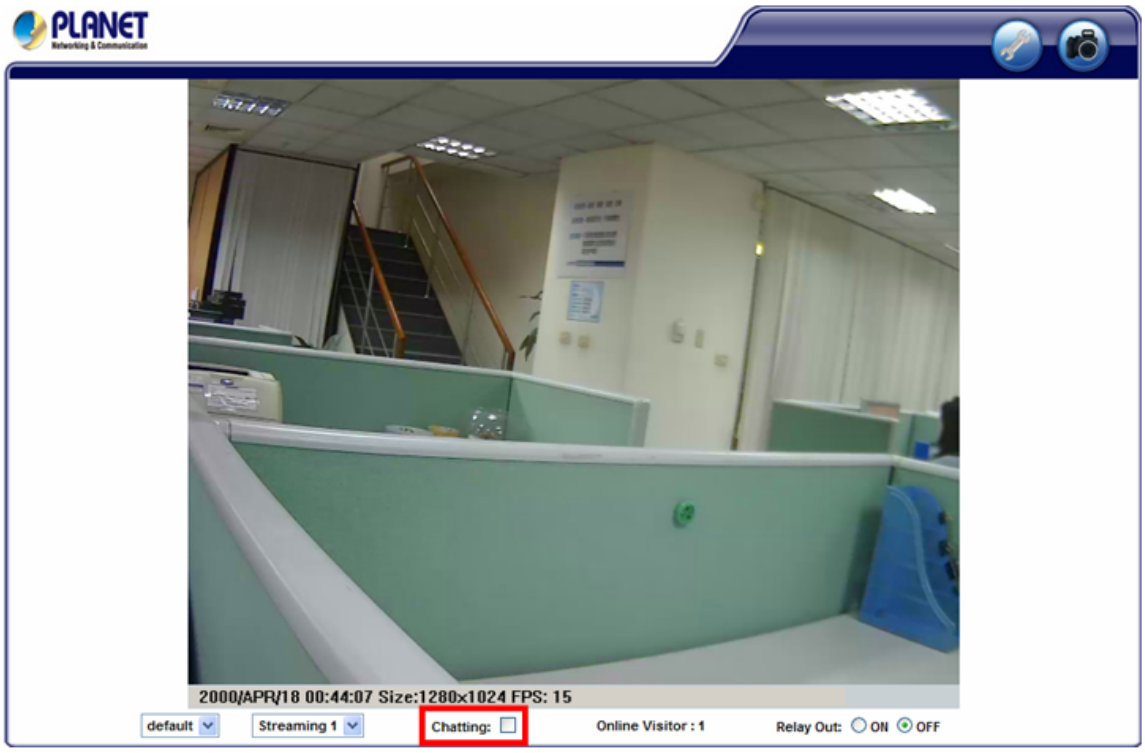
5.3.3 Audio

The ICA-HM136 supports 2-way audio. User can send audio from ICA-HM136 Built-in mic to remote PC; User can also send audio from remote PC to ICA-HM136's external speaker.

(1) Audio from IP camera built-in mic to local PC: select "**Enable**" to start this function.



(2) Audio from local PC to ICA-HM136: Check "**chatting**" in the browsing page.



NOTE: The Audio will not be smooth when enable SD card recording function simultaneously.

5.4 Event List

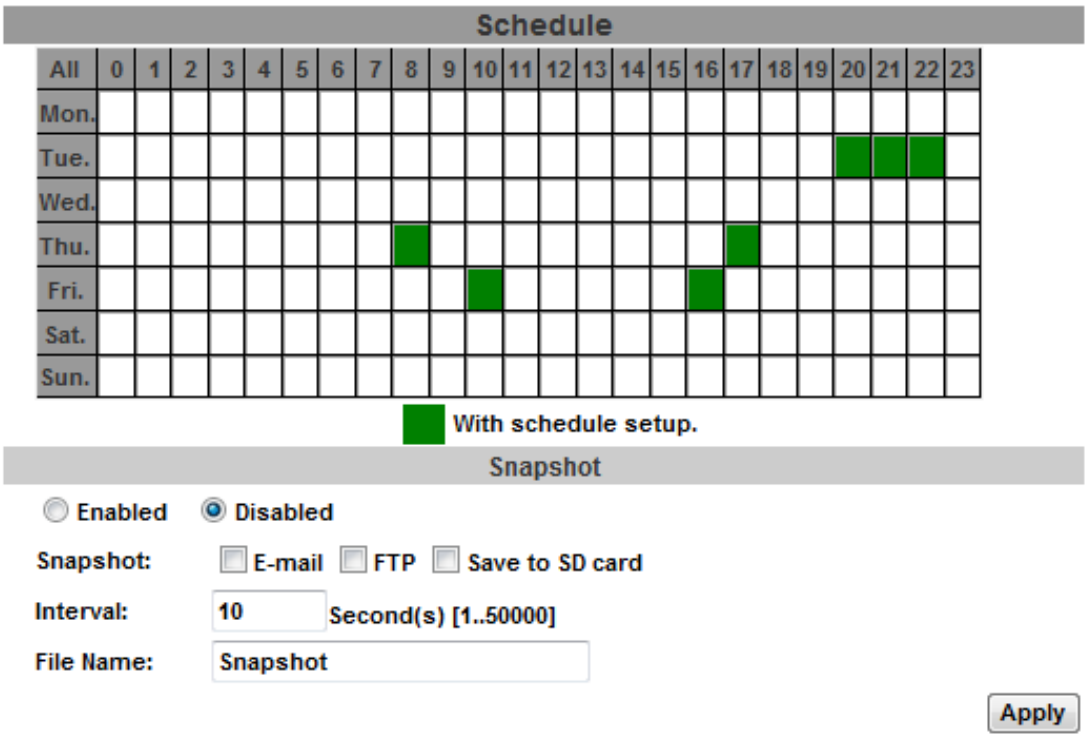
The ICA-HM136 provides multiple event settings.

5.4.1 Event Setting

Motion Detection	IP CAMERA allows 3 are as motion de tection. Whe n motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote f tp serve r, trigger the relay , and save video to local SD card. T o set up the motion area, click “Area Setting ”. Usi ng mo use to d rag a nd draw the area. T he same operation for area 2 and 3.
Record File Setting	IP CAMERA allows 3 dif ferent types of recording file to chang e its re cord size. Whe n mo tion/alarm i s trigge red, th ere a re 3 different types of record mode. (1) AVI File (With Record File Setting) (2) Multi-JPEG (With Re cord File Setting), only with JPEG compression format. (3) Single JPEG (Single File with Interval Setting)
Record Time Setting	Pre Alarm and Post Alarm setups for video st art and end time when motion detected, I/O, or other devices got triggered. Note: Pre/Post Alarm record time is base on record time setting and IP Cam built-in Ram memory. Limited by IP Cam built-in Ram Memory, When information is too much or video quality set too high, it wi ll cause recording frame drop or d ecrease on post alarm recording time.
Network Disconnected	When the network is down, it will sav e the video t o local SD card. Note: This function is only enabled in wire connection.
Network IP check	When the co nnection is d own, it reco rds the video to SD card. Make sure the video re cording i s continuo us. T o use thi s function, key in the IP add ress of the PC which ha s recording software inst alled. Enabl e the f unction of “Save to SD ca rd”, then click “Apply”. Note: The i nterval of two v ideo files on SD card is fixed with 30 seconds.

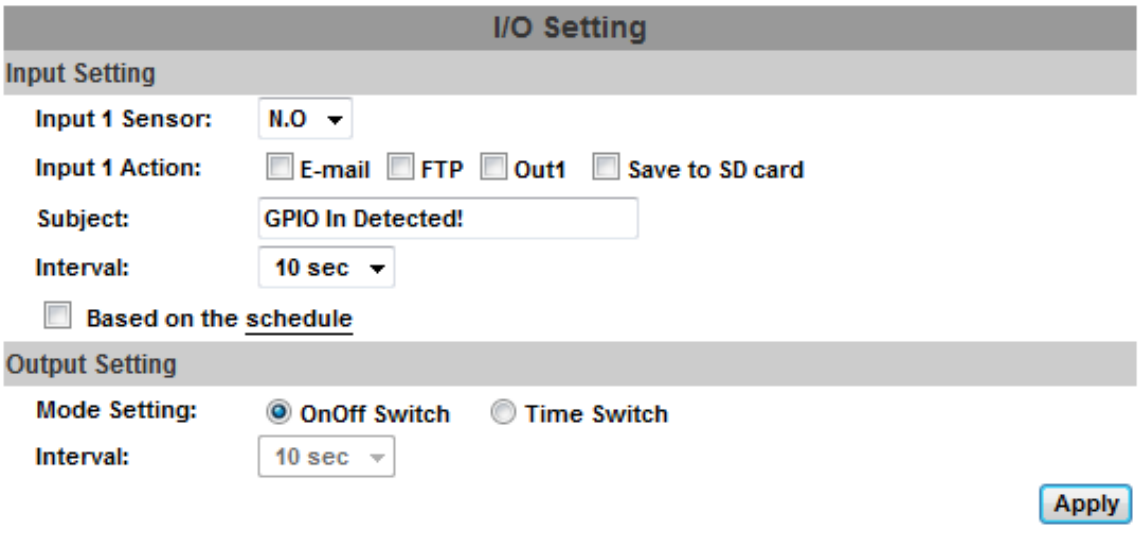
5.4.2 Schedule

Schedule	After complete the schedule se tup, the camera dat a will be recorded according to the schedule setup.
Snapshot	After enable the sn apshot function, user can sele ct the stora ge position of snap shot file, the interval time of sna pshot and the reserved file name of snapshot.



5.4.3 I/O Setting

The ICA-HM136 supports 1 input/ 1 output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.



NOTE: Please connect to propriety relay box to reduce the risk of electric shock & damaged.

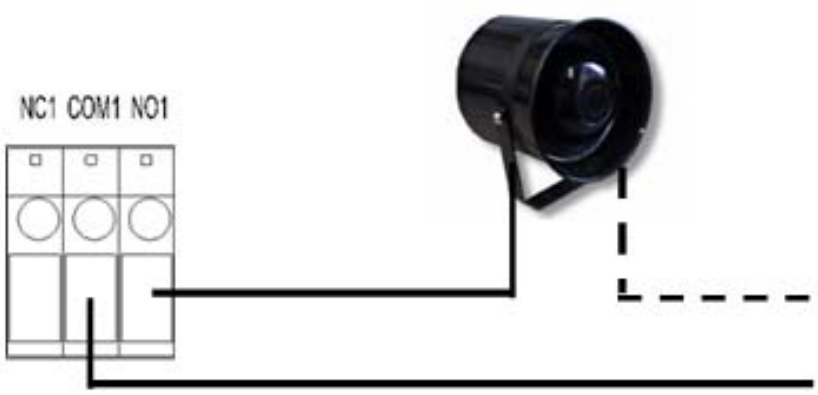
Alarm Input Setting	By GPIO I/O port input that prov ides related action while I/O input triggered.
GPIO Output Setting	By GPIO I/O port outp ut that provides O nOff Switch, Slide Switch & Pan/Tilt Module for using with relay box.

GPIO pin define please refer to the part of Front / Back plane & I/O port pin assignment.

GPIO 0	ALARM INPUT Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
GPIO 1	
GPIO 2	ALARM OUTPUT Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
GPIO 3	

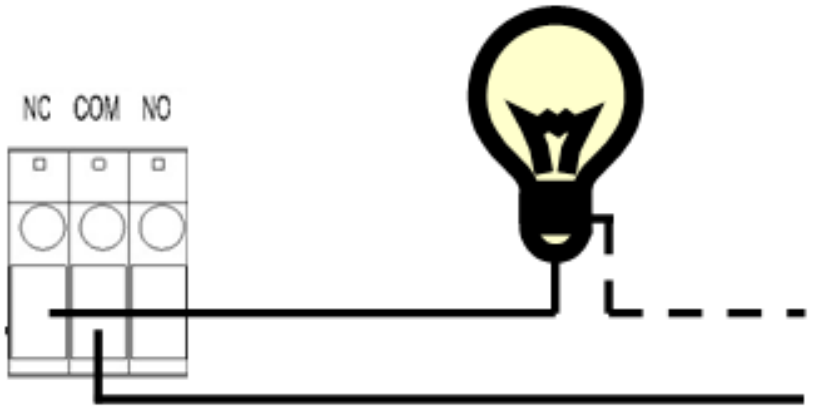
GPIO INSTALLATION EXAMPLE 1

Trigger a normal off (Normal Open) alarm siren on when event/motion occur at COM:



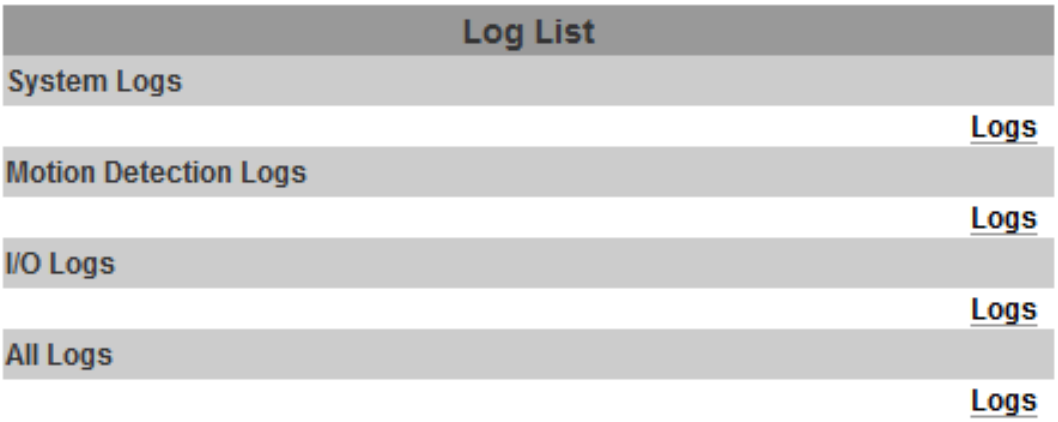
GPIO INSTALLATION EXAMPLE 2

Trigger the normal on (Normal Close) indoor illumination off when event / motion occur at COM:



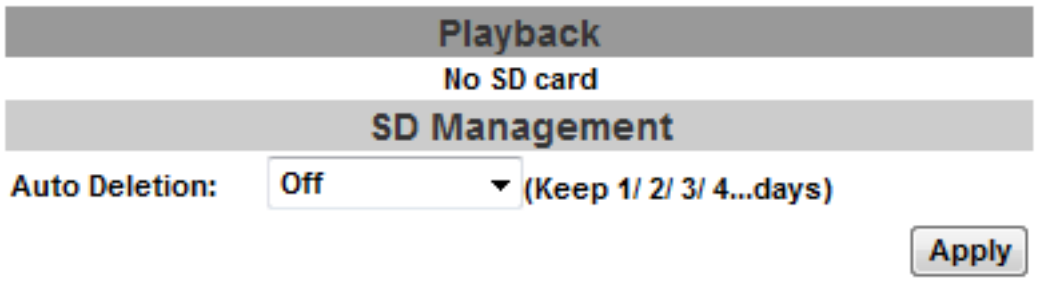
5.4.4 Log List

Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.



5.4.5 SD Card

Please Insert SD cards before use it. Make sure pushing SD card into the slot completely.



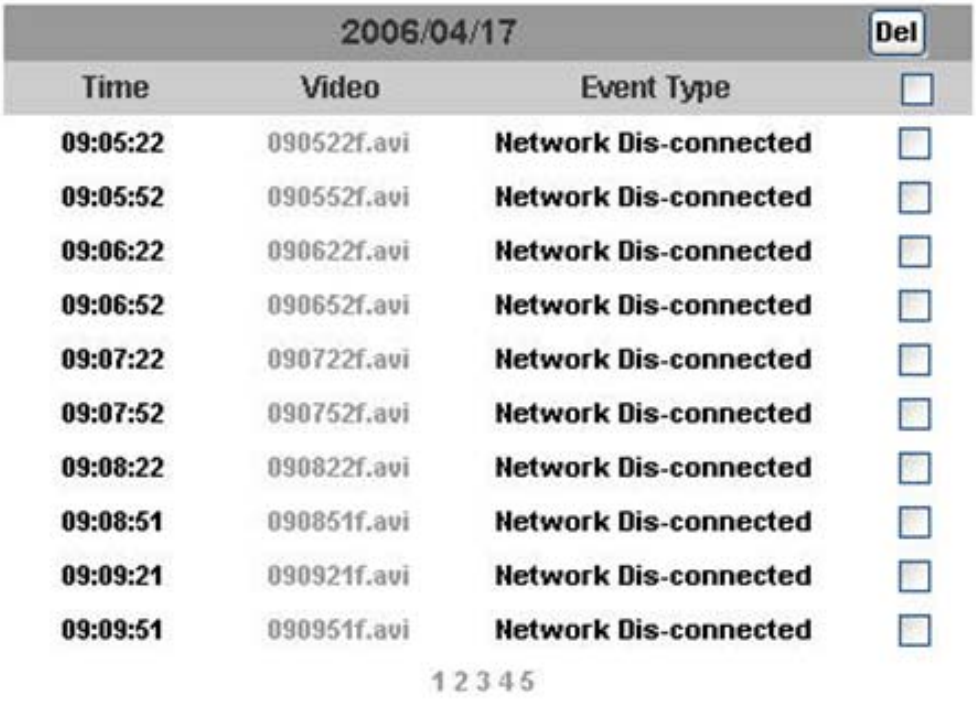
NOTE:	The use of the SD card will affect the operat ion of the IP CAMERA slightly, such as affecting the frame rate of the video.

Playback, the procedures are:

(1) It will show the capacity of the SD card. Click the date listed on this page. It will show the list of the video.

(2) The video format is AVI. Click the video to start Microsoft Media Player to play it.

(3) To delete the video, check it, and then click Del. When the SD card is full, it will remove the oldest video automatically.



Appendix A: Factory Default

To recover the default IP address and password, please follow the following steps.

(1) Remove power and Ethernet cable, and press and hold the button in the back of IP CAMERA.

(2) Power on (don't plug Ethernet cable) the camera. Don't release the button during the system booting.

(3) It will take around 30 seconds to boot the camera.

(4) Release the button when camera finishes proceed.

(5) Plug the Ethernet cable.

(6) Re-login the camera using the default IP (http://192.168.0.20), and username (admin), password (admin).

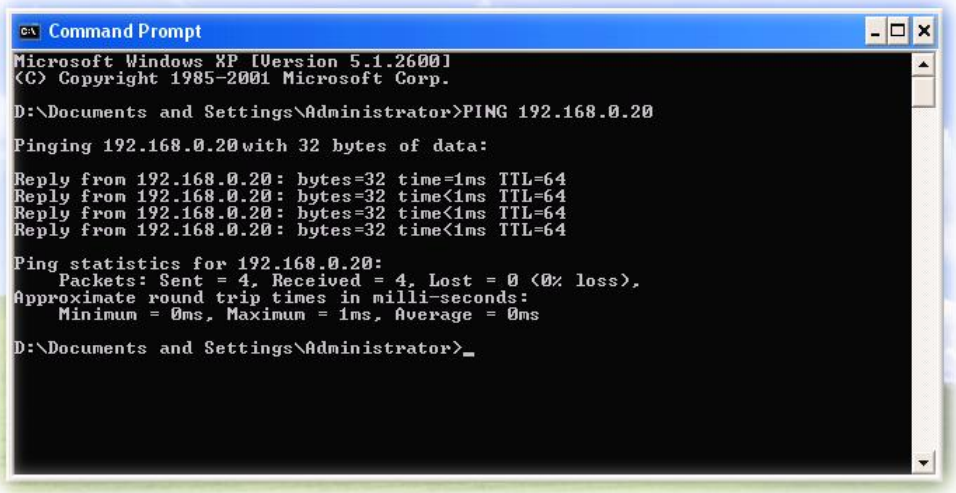
Appendix B: PING IP Address

The PING (stands for Packet Internet Grop er) 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 Internet camera installed or if the IP address conflicts with any other devices 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.



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

Appendix C: 3GPP Access

To use the 3GPP function, in addition to previous section, you might need more information or configuration to make this function work.

Note:	That to use the 3GPP function, it strongly recommends to install the Networked Device with a public and fixed IP address without any firewall protection.

RTSP Port:
Port 554 is the default for RTSP service. However, sometimes, some service providers change this port number for some reasons. If so, user needs to change this port accordingly.

Dialing procedure:

1. Choose a verified player (PacketVideo or Realplayer currently)

2. Use the following default URL to access:

   rtsp://*IP-Address*/3g

Where *host* is the host name or IP address of the camera.

Compatible 3G mobile phone:
Please contact your dealer to get the approved list of compatible 3G phone.

Note:	Besides IP camera and 3G mobile phone. You will also need to make sure the ISP and company has provided the 3GPP service to you.

Appendix D:
Bandwidth and Video Size Estimation

The frame rate of video transmitted from the Internet camera depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your Internet camera.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the Internet camera may be varying.

Image Resolution	Average range of data sizes for M-JPEG mode	Average bit rate for MPEG-4 mode	Average bit rate for H.264 mode
160 x 120 (QQVGA)	3 ~ 6k byte per frame	64kbps~256kbps @ 30fps	32kbps~192kbps @ 30fps
320 x 240 (QVGA)	8 ~ 20k byte per frame	256kbps~768kbps @ 30fps	192kbps~512kbps @ 30fps
640 x 480 (VGA)	20 ~ 50K byte per frame	512kbps~2048kbps @ 30fps	384kbps~1536kbps @ 30fps
1280x1024 (SXGA)	100 ~ 200k byte per frame	NA	512kbps~3076kbps @ 15fps
1600x1200 (UXGA)	600 ~ 1500k byte per frame	NA	640kbps~6144kbps @ 15fps

NOTE: Audio streaming also takes bandwidth around 5 kbps to 64 kbps. Most xDSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

Appendix E: DDNS Application

1. Preface

If you have a Cable modem or xDSL, this is a great way to host your own Networked Device or other TCP/IP Service. Get your own domain like www.yourname.com, www.yourname.com.tw etc. (Note: This domain must be registered with Internic via registration authorities such as Network Solutions, DirectNIC, Register.com etc). Your domain name's dynamic IP address is automatically tracked by a DDNS server.

Host your own Networked Device and much more no matter what your computer's IP address may be and even if you have dialup, DSL or cable modem Internet connection where your computer's IP address changes all the time!! DDNS service supports all top level domain names including but not limited to .com, .net, .org, .to, .uk etc.

2. Ethernet Network Environment

Normally, DDNS service is only necessary for the users that could only obtain dynamic IP addresses. As to the users that could obtain the static valid IP address, they do not usually have to apply the DDNS service. Before we decide if DDNS is necessary for the users, we have to check what kind of Ethernet network environment we have to install our Networked Device on.

(1) Environment of Fixed Valid IP Network

If users could obtain valid IP addresses, they could save the effort to apply DDNS service. Because the IP address in this environment is fixed, users could input the IP address or domain name of demo site directly in the IE browser.

(2) Environment of Dynamic IP Network

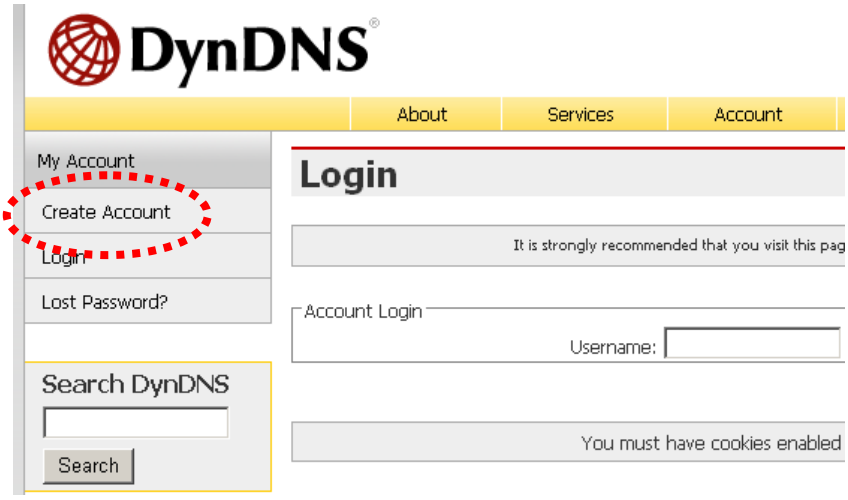
If users is under an environment of dynamic IP network (Dial-up xDSL), they have to apply a domain name in advance. Then apply DDNS service. Finally setup the necessary information of DDNS and PPPoE of the Networked Device in order to let the outside administrator be able to access through Internet.

3. Application Steps – DDNS & Domain Name

(1). Visit the following web site: http://www.dyndns.org/

(2). Click "Account"

(3). After the columns show up at the left side, click “Create Account”.



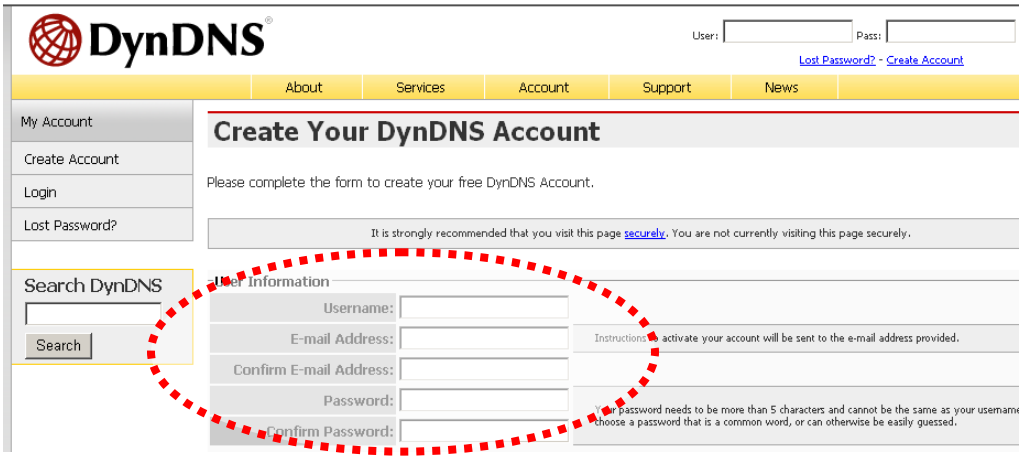
(4). Fill the application agreement and necessary information.

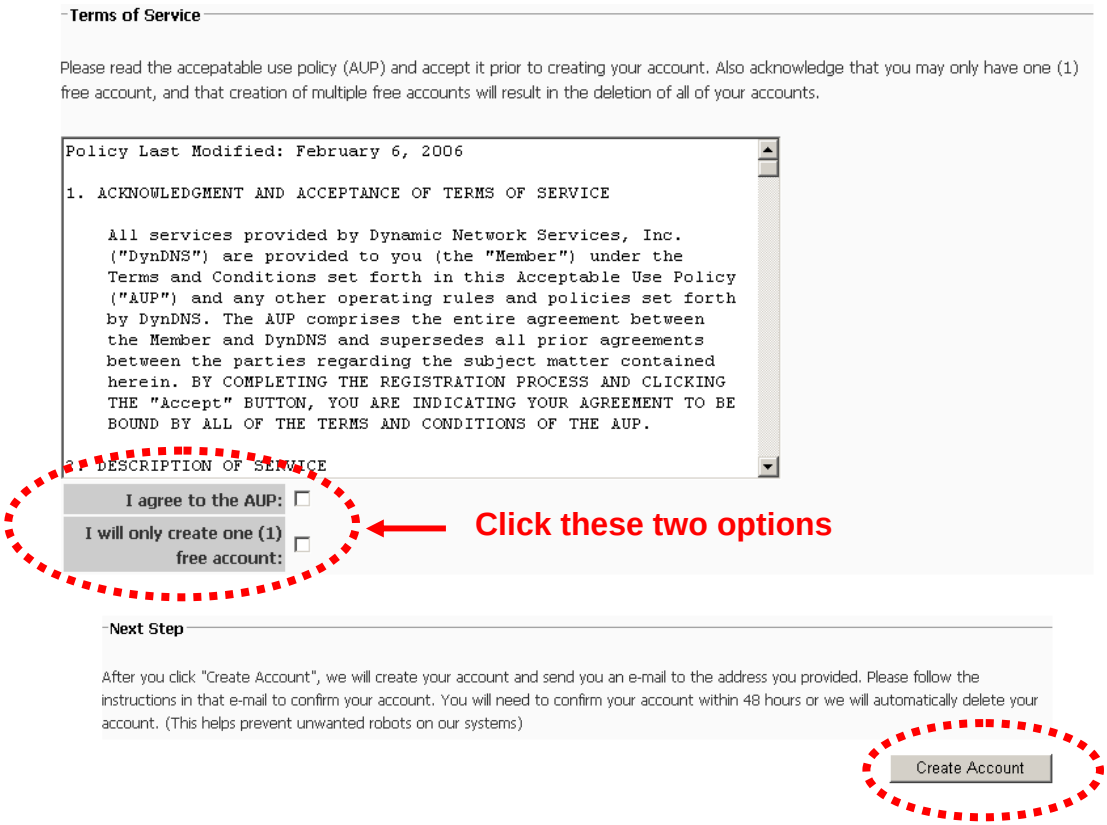
a. Username

b. E-mail address and confirmation

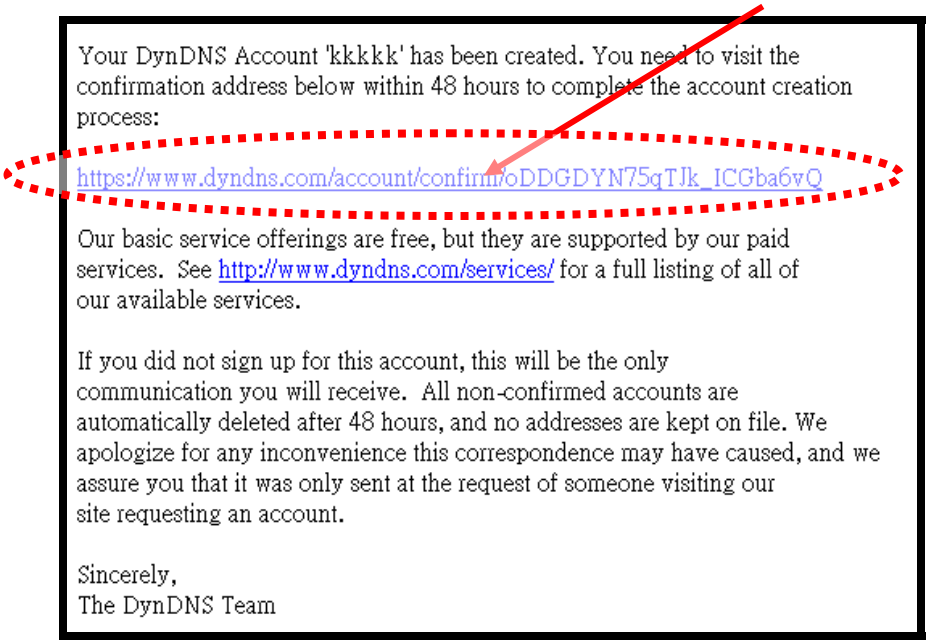
c. Password and confirmation

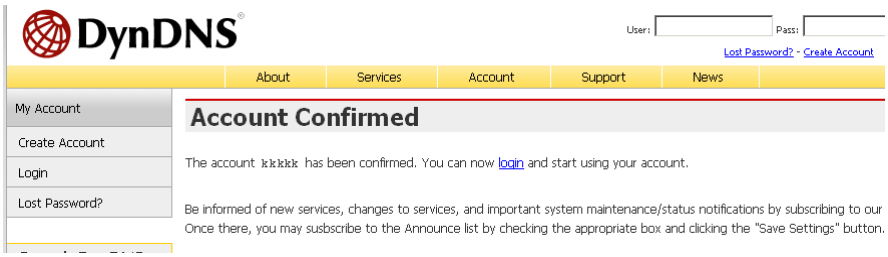
d. Submit all the input information and finish creating an account





(5). Check your e-mail mailbox. There will be an e-mail with a title "Y our DynDNS Account Information". Click the hyperlink address to confirm the DDNS service that you just applied. Then DDNS you applied activated.

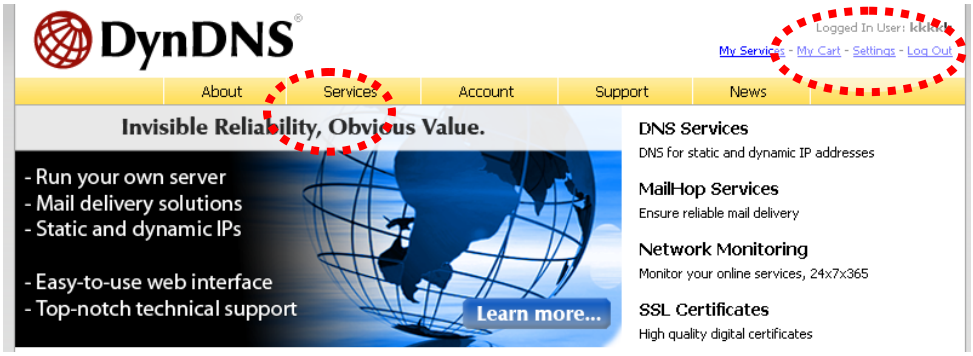




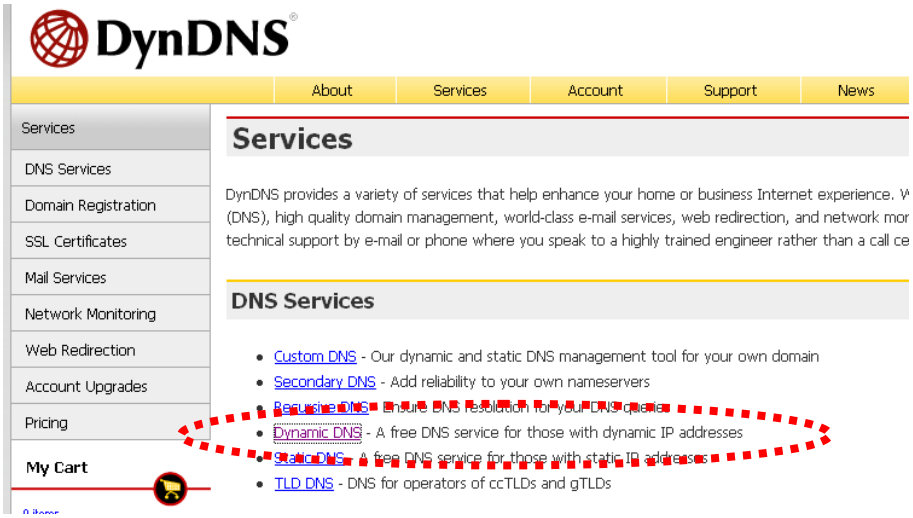
(6). Enter the web page http://www.dyndns.org/ again. Input your username and password that you just applied to login administration interface of DDNS server.

(7). If the correct username and password are input, you can see the following picture at the top-right of the login page.

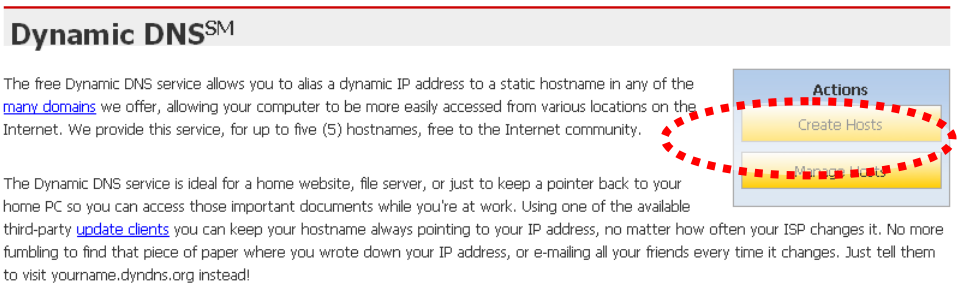
(8). Click the "Services".



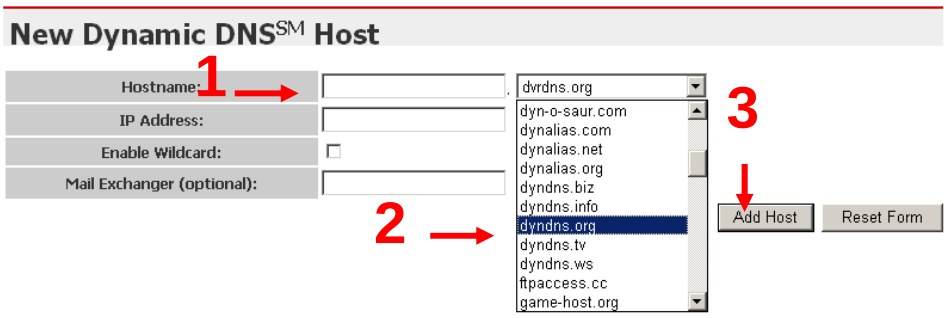
(9). Click the " Dynamic DNS ".



(10). Click the "Create Hosts".



(11). We could create a domain name without any charge at this step. First, we input the host name. (No.1) Then we pick a domain that is easy to remember. Finally (No.2), click the "Add Host" to submit the domain name information. (No.3)



4. Setup the DDNS and PPPoE of Network Device

At last, use rs have to e nter the web p age of Networked Device and setup the necessary information of DDNS and PPPoE after the application of DDNS service. Please check the user manual to access the DDNS and PPPoE p ages. Af ter saving the modification, rest art the device. The external users coul d brow se the Netwo rked Device by the input of their doma in name.

Appendix F:
Configure 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 setup as fixed IP address, also the port forwarding or Virtual Server function of router needs to be setup. 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 as below:

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

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

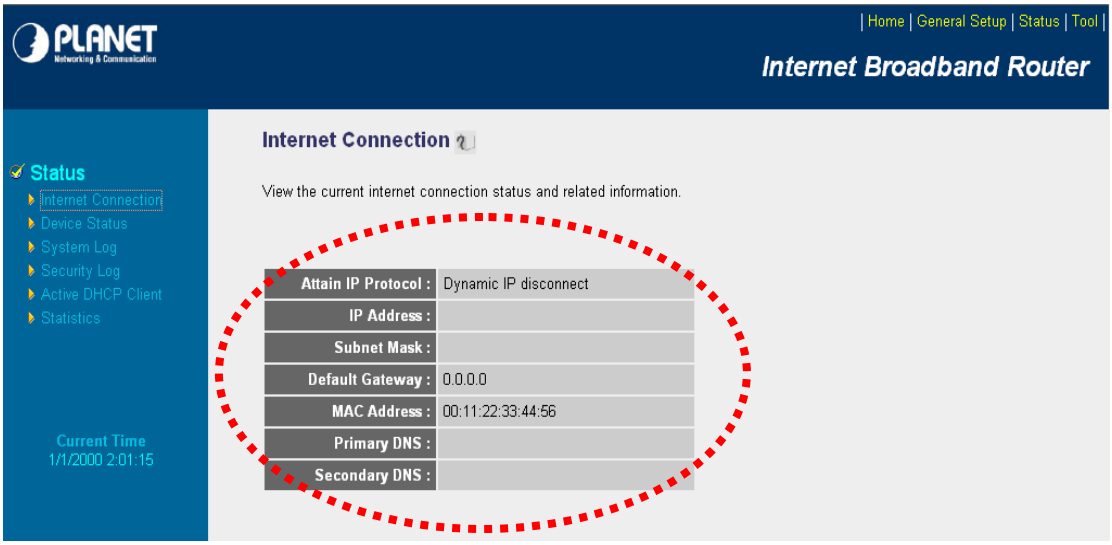
1. Assign a local/fixed IP address to your device

The device must be assigned a local and fixed IP Address that allows it to be recognized by the router. Manually setup 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. The PLANET WNRT-620 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.



Your WAN IP Address will be listed here.

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

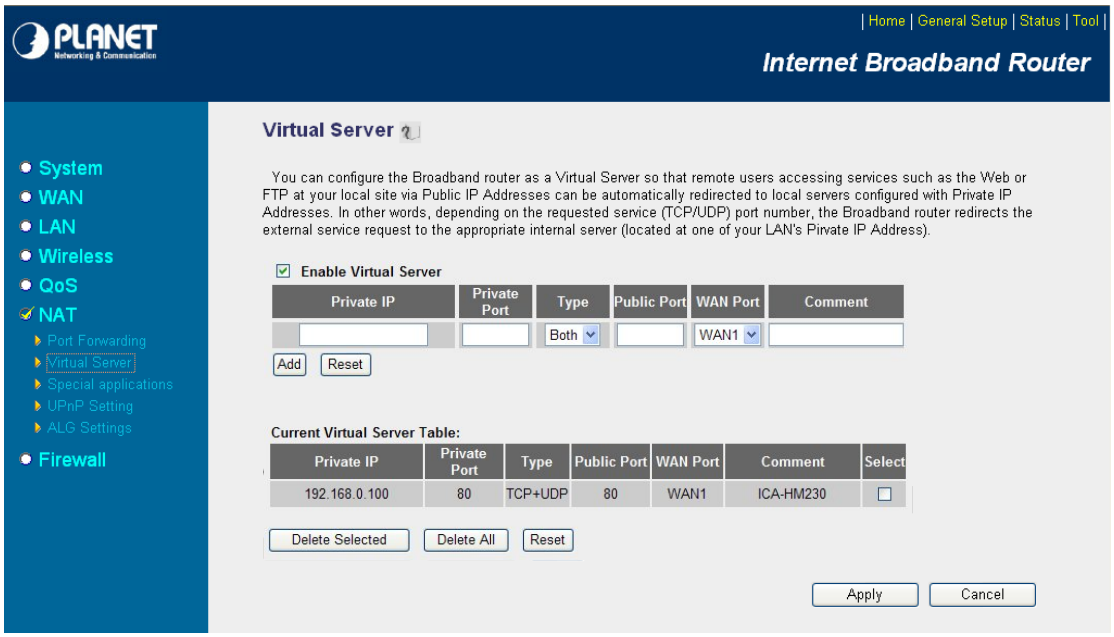
The firewall security features built into the router and most routers prevent users from accessing the video from the device over the Internet. The router connects to the Internet over a series of numbered ports. The ports normally used by the device are blocked from access over the Internet. Therefore, 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**, for example) in the **Private IP** field.
- If you are using the default camera port settings, enter **80** into the **Public** and **Private Port** section, click **Add**.

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

NOTE: Some ISPs block acce ss 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.



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 access from WAN by the router's WAN IP Address.

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

Appendix G: SD Card Recommended

SD Card Recommended：

SanDisk	128M
SanDisk	256M
SanDisk	512M
SanDisk	1GB
SanDisk	2GB
SanDisk	4GB
SanDisk	8GB
SanDisk	16GB
SanDisk	32GB
Transcend	4GB
Transcend	8GB
Transcend	16GB
Transcend	32GB

Appendix H:
Troubleshooting & Frequently Asked Questions

Features	
The video and audio codec is adopted in the device.	The device utilizes H.264, MPEG-4 and M-JPEG triple compression to providing high quality images. Where H.264 and MPEG-4 are standards for video compression and M-JPEG is a standard for image compression. The audio codec is defined as AMR for 3GPP and G.711 for RTSP streaming.
The maximum number of user accesses the device simultaneously.	The maximum number of users is limited to 10. However, it also depends on the total bandwidth accessed to this device from clients.
Install 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)Remove power, and press and hold the button in the back of IP CAMERA. (2)Power on the camera. Don't release the button during the system booting. (3)It will take around 30 seconds to boot the camera. (4)Release the button when camera finishes proceed. (5)Re-login the camera using the default IP (http://192.168.0.20), and username (admin), password (admin).
Forgot the IP address of the device.	Check IP address of device by using the PLANET IP Installer program or by UPnP discovery or set the device to default by Reset button.
PLANET IP Installer program cannot find the device.	● Re-power the device if cannot find the unit within 1 minutes. ● Do not connect device over a router. PLANET IP Installer program cannot detect device over a router. ● If IP address is not assigned to the PC which running PLANET IP Installer program, then PLANET IP Installer 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 IP Installer program fails to save the network parameters.	Network may have trouble. Confirm the parameters and connections of the device.
UPnP NAT Traversal	
Can not 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 but others are failed	Maybe too many IP cameras have been installed on the LAN, and then 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.
Access this device	
Cannot access the login page and other web pages of the Network Camera from Internet Explorer	• 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 due to 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 is ok. • Make sure enter the IP address of Internet Explorer is correct. If the Network Camera has a dynamic address, it may have changed since you last checked it. • Network congestion may prevent the web page appearing quickly. Wait for a while. 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. • Make sure the http port used by the Network Camera, default=80, is forward 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, set up 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 r outer may prohibit acce ss 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. ● When you use DDNS, you need to set Default Gateway and DNS server address. ● If it's not working after above procedure, reset Network Camera to default setting and installed it again.
Image or video does not appear in the main page.	● 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.
How to check the device's ActiveX is installed on your computer	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.
Internet Explorer displays the following message: "Your current security settings prohibit downloading ActiveX controls".	Setup the IE security settings or configure the individual settings to allow downloading and scripting of ActiveX controls.
The device work locally but not externally.	● 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 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.

The unreadable characters are displayed.	Use the operating system of the selected language. Set the Encoding or the Character Set of the selected language on the Internet Explorer.
Frame rate is slower than the setting.	● 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.
Blank screen or very slow video when audio is enabled.	● Your connection to the device does not have enough bandwidth to support a higher frame rate for the streamed image size. Try reducing the video streaming size to 160x120 or 320x240 and/or disabling audio. ● Audio will consume 32 kbps. Disable audio to improve video. Your Internet connection may not have enough bandwidth to support streaming audio from the device.
Image Transfer on e-mail or FTP does not work.	● 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.	● Adjust White Balance. ● To insure 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.	● If the object is dark, the image will flicker. Make the condition around the Camera brighter.

Appendix I: Product Specification

Product	ICA-HM136
Video Specification	
Image Device	1/3.2" 2Mega-Pixel CMOS Sensor
Effective Pixels	1600 x 1200 pixels
Sensitivity	0.5lux
Lens	2.7mm – 9mm Vari-focal lens with auto iris and IR cut filter
Illuminator	0 Lux IR on
View Angle	H: 30.4~101 Degree / V: 23~75 Degree
Video Encoder	H.264, MPEG4 and Motion JPEG simultaneously (Tri-encoders)
Video Profile	12 profiles simultaneously - H.264 UXGA / 720p / SXGA/ VGA / QVGA / QCIF - M-JPEG UXGA / 720p / SXGA/ VGA / QVGA - MPEG4 QCIF (Only for 3GPP)
Frame Rate	UXGA Up to 15fps SXGA Up to 22fps HD-720p / SVGA / VGA / QVGA / QCIF Up to 30fps
Image Setting	Brightness, sharpness, contrast, AGC, BLC, Night Mode Text, time and date overlay
Streaming	Simultaneously multi-profile streaming M-JPEG streaming over HTTP Supports 3GPP mobile surveillance Controllable frame rate and bandwidth Constant and variable bit rate (MPEG4 / H.264)
Audio Specification	
Audio Encoder	RTSP:G.711 3GPP:AMR
Audio Streaming	One-way or Two-way
Microphone	External microphone input
Audio Output	Phone Jack
Network Specification	
Supported Protocols	TCP, UDP, HTTP, SMTP, FTP, NTP, DNS, DDNS, DHCP, UPnP, RTSP, RTP, RTCP, PPPoE, 3GPP, ICMP
Security	Password protection, user access log
Users	10 simultaneous unicast users
Ethernet	10/100M auto negotiation
System Integration	
Application Programming Interface	Open API for software integration SDK
Alarm Triggers	Intelligent video motion detection and external input
Motion Detection	3-zone video motion detection
Alarm Events	File upload via FTP, email and save to MicroSD Card External output activation
Video Buffer	Pre- 5sec and post- 10 sec alarm buffering
General	
Power Supply	12V DC external power adapter
PoE	IEEE 802.3af
PoE Consumption	Max 9 W while IR LED ON Max 7 W while IR LED OFF
Connectors	RJ-45 10BaseT/100BaseTX , DC jack

Illumination LED	IR LEDS
IR LED	Infrared LED ×18pcs
IR Wavelength	850nm
IR Distance	20M
Operating Temperature	-20 ~ 50 degree C
Viewing System	
OS	Windows® XP, Vista 32bit, Win7 32bit, Server 2003
Browser	IE 6.0 or latter
Cell Phone	With 3GPP player
Video Player	VLC, Quick Time, Real Player
Software	
Monitor/ Recording / Management	CV3P (2-ch Cam Viewer Three Pro Trail Version) CV3L (64-ch Cam Viewer Three Lite Bundle Version)
Search & Installation	PLANET IP Installer