



2 Mega-Pixel Wireless Outdoor IR IP Camera

ICA-HM315W

User's Manual

Version: 1.00

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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 2 Mega-Pixel Wireless Outdoor IR IP Camera
Model: ICA-HM315W
Rev: 1.0 (December. 2010)
Part No. EM-ICAHM315W

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1. Introduction

This 2 Mega-Pixel Wireless Outdoor IR IP Camera is an inexpensive fully scalable surveillance technology. Because the 2 Mega-Pixel Wireless Outdoor IR IP Cameras can be plugged into your existing local area network infrastructure, you will potentially save thousands of dollars on unnecessary cabling.

The 2 Mega-Pixel Wireless Outdoor IR IP Cameras is accessible via the LAN or Internet connection. Connect your 2 Mega-Pixel Wireless Outdoor IR IP Camera directly to a local area network or xDSL modem, and with Microsoft Internet Explorer you get instant, on demand video streams. Within minutes you can set up the 2 Mega-Pixel Wireless Outdoor IR IP Camera to capture a video sequence to a PC. The live video image can be uploaded to a website for the world to see or made available only to select users on the network.

The PLANET Internet camera support Multi-Profile function can stands for simultaneously video streams. These Network Cameras can generate H.264, MPEG-4 and M-JPEG streaming simultaneously to different clients. Moreover, the resolution can be different from one client to another. This state-of-art design is considerable to fit in various network environments.

1.1 Overview

This user's manual explains how to operate the 2 Mega-Pixel Wireless Outdoor IR IP Camera from a computer. Basically, the user's manual is written to be read on the computer display. However, users might consider printing it out to access easily and read it before you operate the Network Camera.

1.2 Feature

- 2 Mega-Pixel COMS Sensor with Vari-Focal Lens in 25 meters IR distance
- Clear and high resolution quality pictures for day and night
- 3GPP for 3G mobile remote applications
- Supports IEEE 802.11b/g wireless LAN with WEP and WPA encryption
- Weather proof housing offers protection against various weather conditions
- Motion Detection feature can monitor any suspicious movement in specific area
- DDNS, PPPoE and FTP upload supports more alternatives in surveillance network
- Easy configuration and management via Windows-based utility or web interface

1.3 Package Contents

User can find the following items in the package:

ICA-HM315W x 1

Power Adapter x 1

Screw package x 1

Stand x 1

Antenna 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

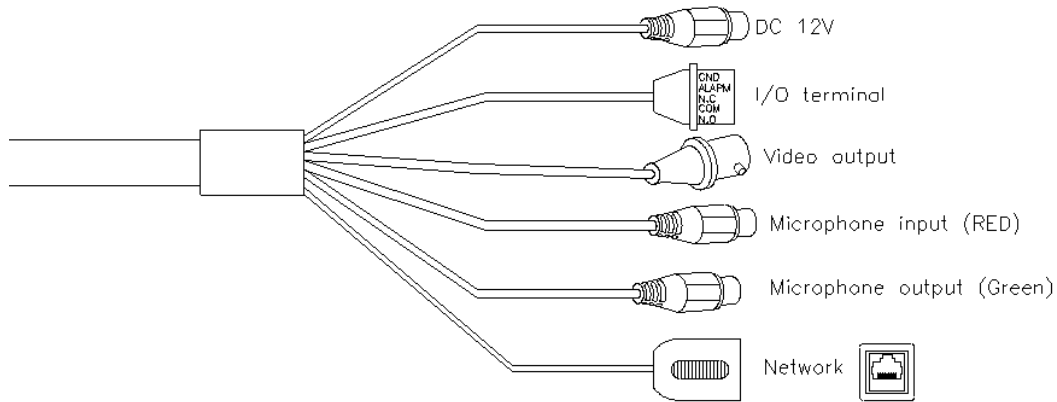
This chapter provides details of installing and configuring the ICA-HM315W.

2.1 System Requirements

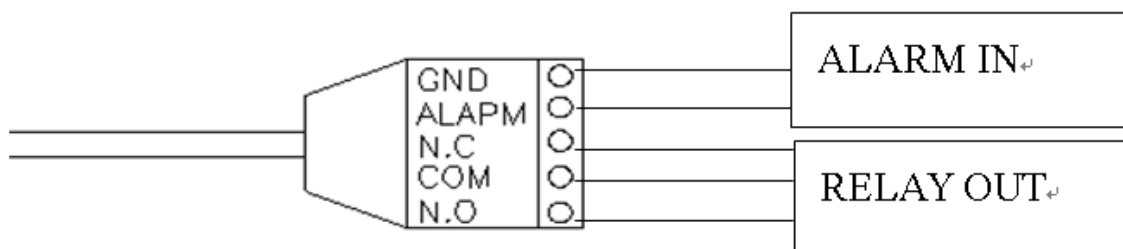
Network Interface	10/100MBase-T Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or later
System Hardware (Suggested)	<ul style="list-style-type: none">· CPU: Intel Dual Core 1.66G, or above· Memory Size : 1024MB (1024 MB or above Recommended)· Graphic card:128MB
System Hardware (Minimum)	<ul style="list-style-type: none">· CPU: Intel-C 2.8G, or above· Memory Size : 512MB (512 MB or above Recommended)· Graphic card:64MB

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

2.2 Physical Description

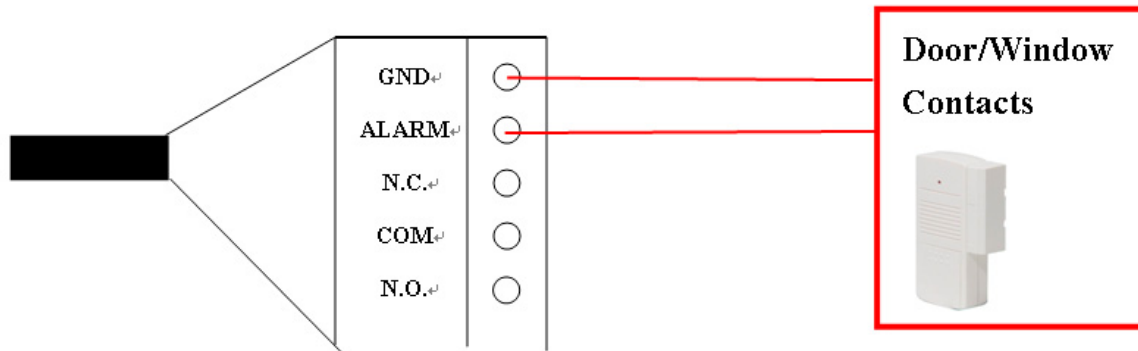


DC12V / Network	Connect a power adapter and IP Camera to PC or local network
I/O Control Instruction	I/O terminal connector – used in application, for e.g., motion detection, event triggering, alarm notifications. It provides the interface to:
Digital Input (GND+Alarm)	An alarm input for connecting devices 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.
Relay output (COM +N.O.) / (COM+N.C.)	An output to Relay switch, for example: LEDs, Sirens, etc
Digital Input	Alarm Input 1. GND (Ground): Initial state is LOW 2. Alarm: Max. 50mA, DC 3.3V
Relay Output	1. N.C. (Normally Close): Max. 1A, 24VDC or 0.2A, 125~240VAC 2. COM: (Common) 3. N.O. (Normally Open): Max. 1A, 24VDC or 0.2A, 125~240VAC

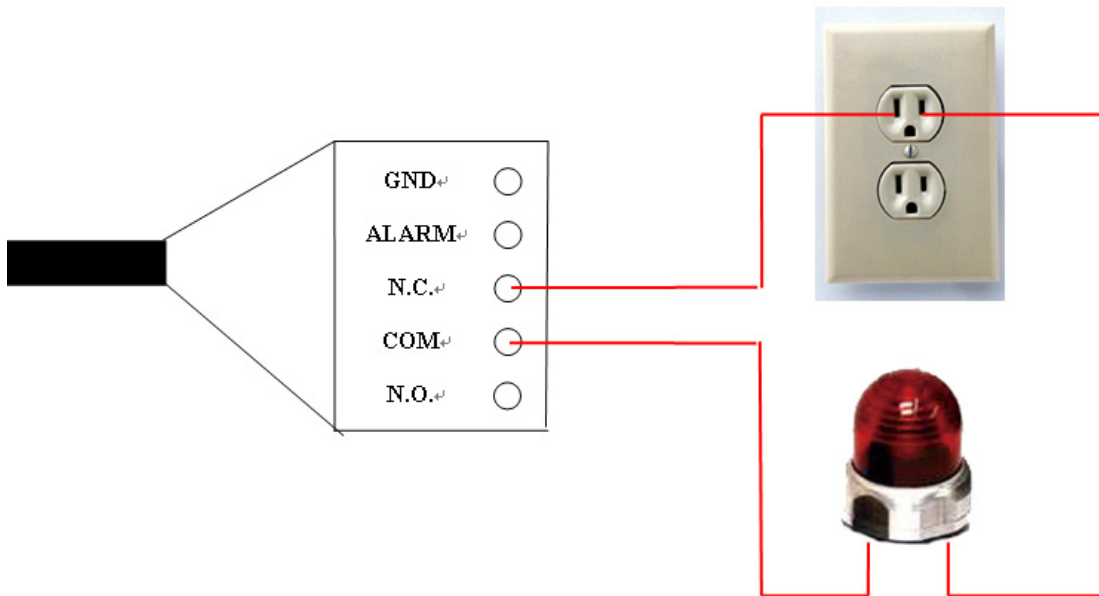


Relay

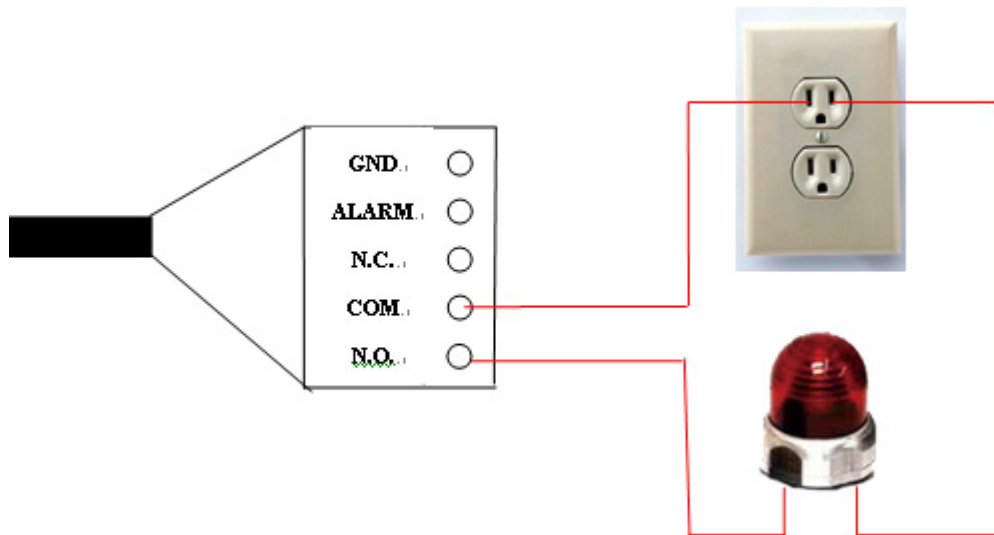
1. Digital Input connection



2. Relay Output Connection



Or



2.3 Hardware Installation

2.3.1 Physical Installation

1. Connect an Ethernet cable

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

2. 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 product may be damaged when Internet camera is connected to a PoE switch and power adapter simultaneously.

3. Attach BNC connector (option)

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

4. Attach Speaker to camera (option)

If user needs not only video stream but also audio stream, then the speaker should be attached to camera.

2.4 Preparation

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.

2.4.1 Search and View 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

Device lists:

Server Name	IP Address

Name

IP

Netmask

Gateway

DNS 1

DNS 2

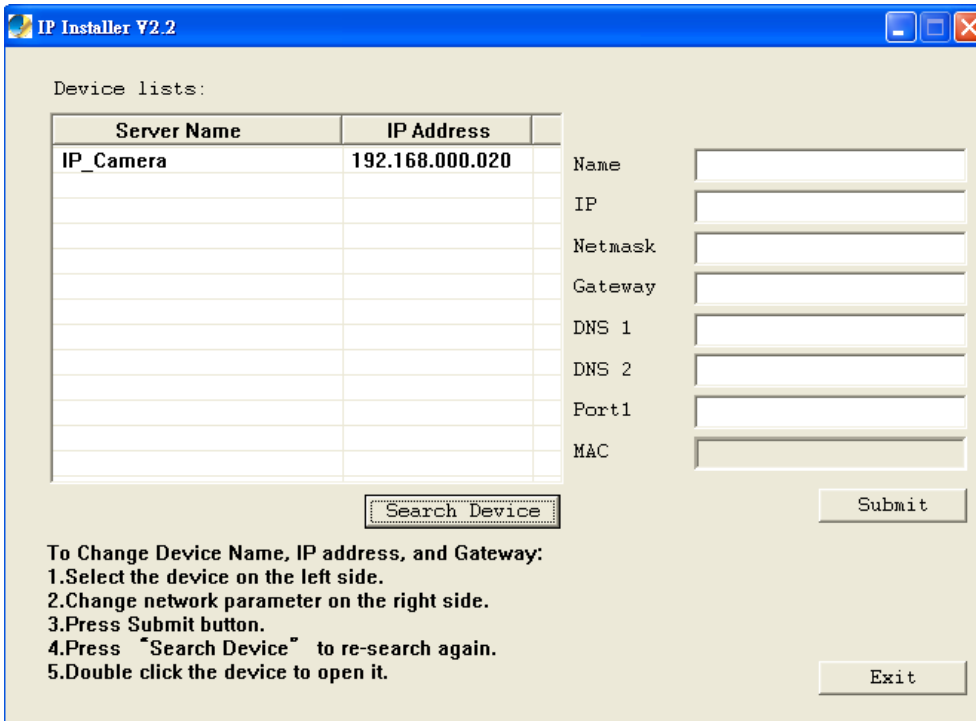
Port1

MAC

To Change Device Name, IP address, and Gateway:

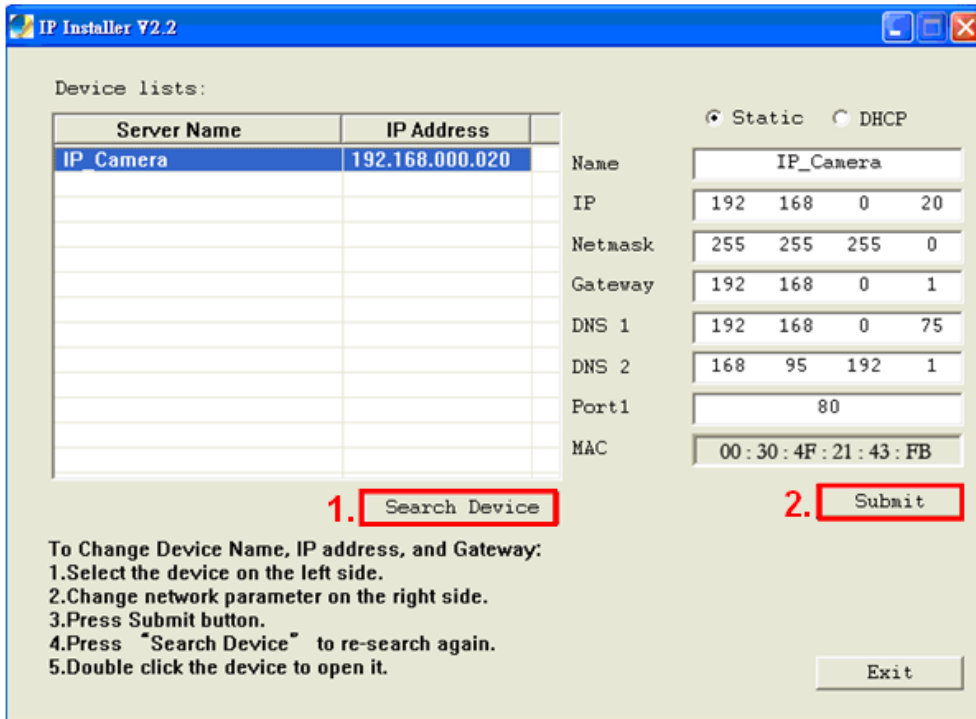
1. Select the device on the left side.
2. Change network parameter on the right side.
3. Press Submit button.
4. Press "Search Device" to re-search again.
5. Double click the device to open it.

When launch the PLANET IP Installer, a searching window will pop up. PLANET IP Installer is starting to search Network Cameras on the LAN. The existed devices will be listed as below.



2.4.2 Configure Network by PLANET IP Installer

In case you want to change the IP related parameters of PLANET IP Installer, please select the device you want to configure and click the "Server Name". Relative settings will be carried out as below.



You could modify the relative settings of the selected device, when you set your IP address. Please check "Submit" button to perform your setting accordingly.

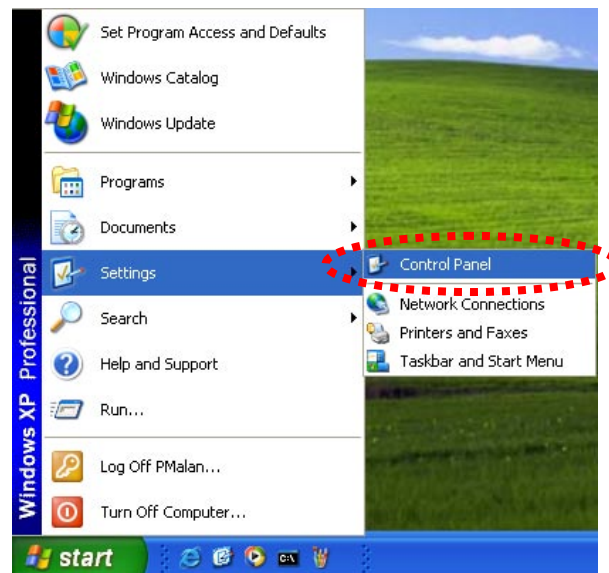
2.5 Using UPnP of Windows XP or Vista

2.5.1 Windows XP

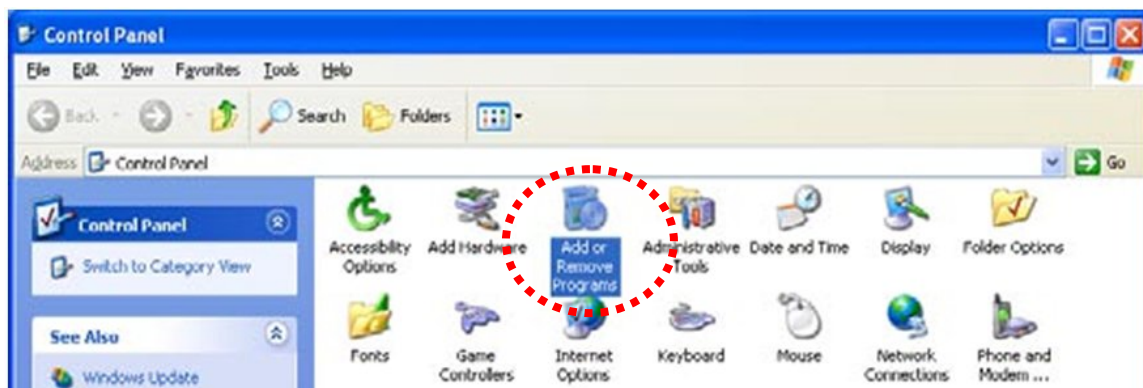
UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows XP, of your PC is UPnP enabled, the device will be very easy to configure.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

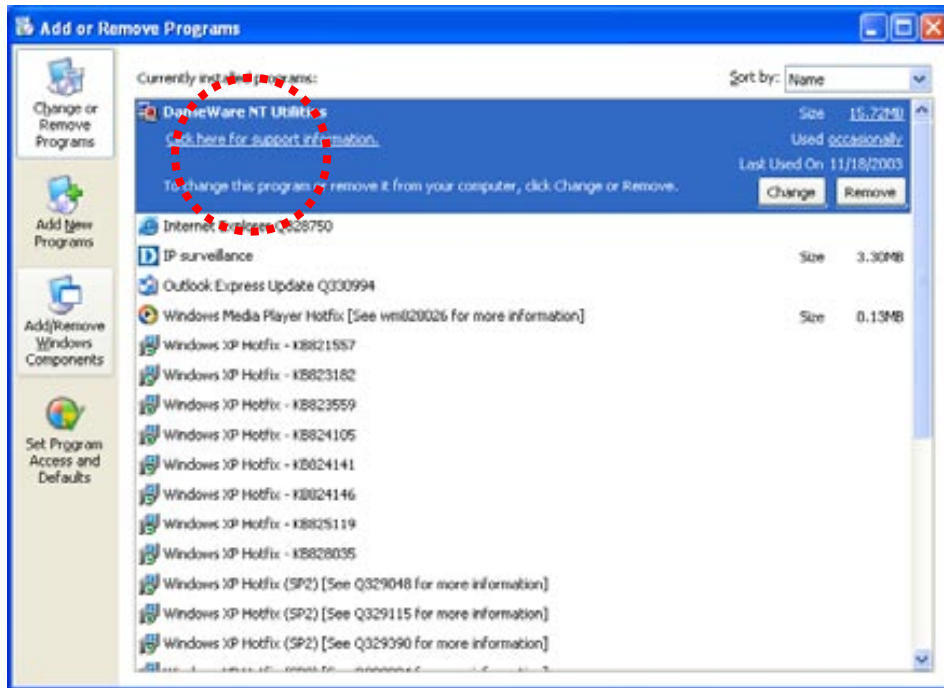
NOTE: Windows 2000 does not support UPnP feature.

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

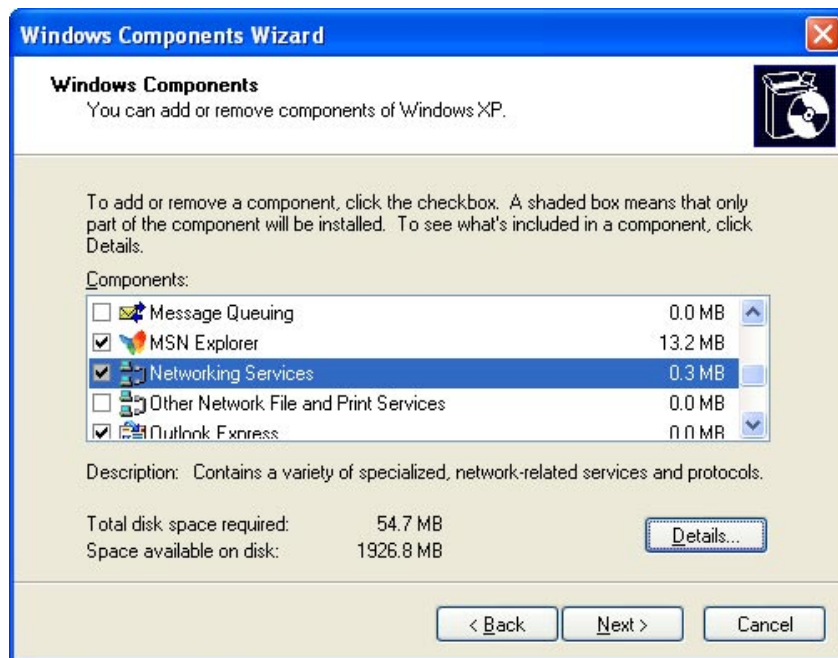


The "**Control Panel**" will display on the screen and double click "**Add or Remove Programs**" to continue

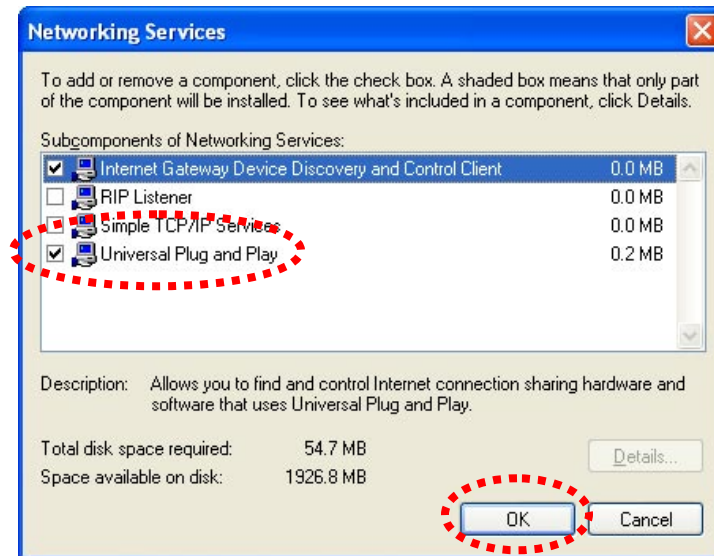




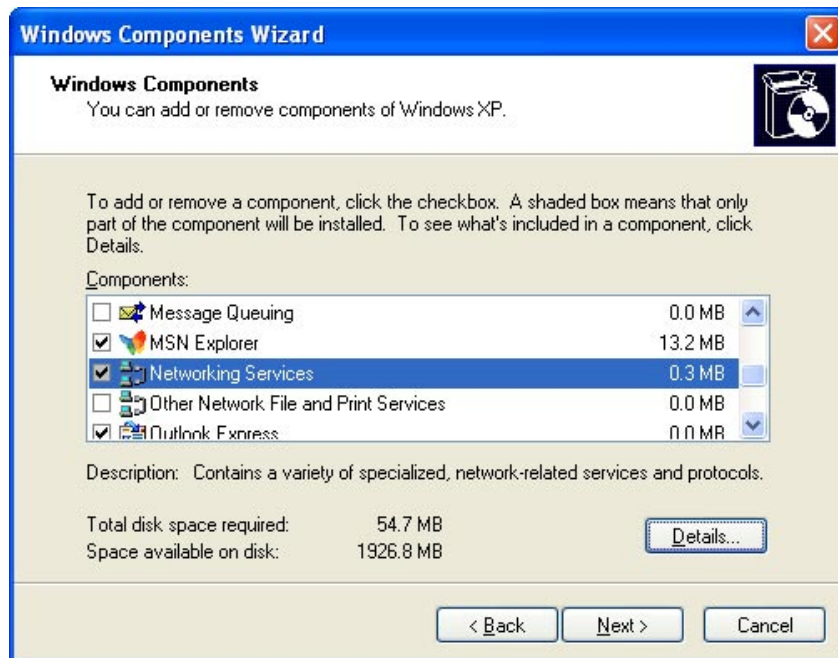
The following screen will appear, select **“Networking Services”** and click **“Details”** to continue



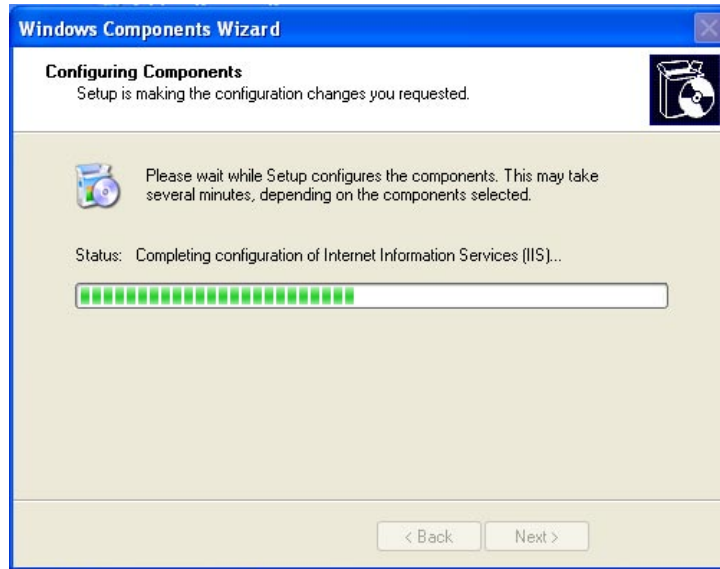
The “Networking Services” will display on the screen, select “**Universal Plug and Play**” and click “**OK**” to continue.



Please click “**Next**” to continue



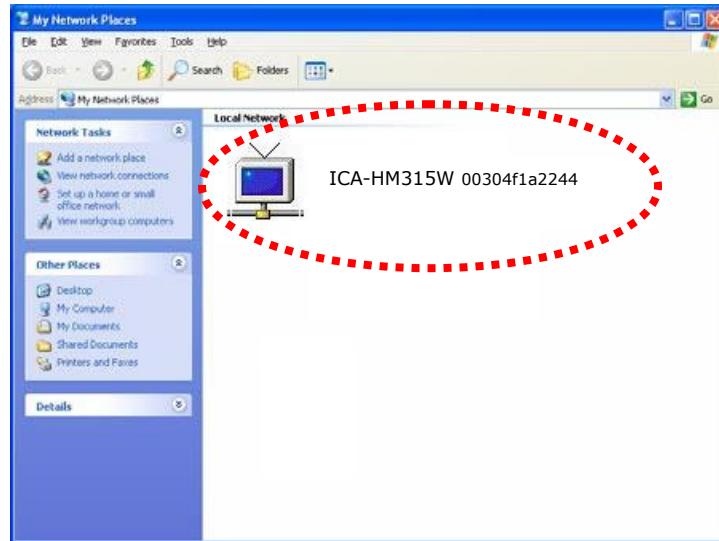
The program will start installing the UPnP automatically. You will see the below pop-up screen, please wait while Setup configures the components.



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



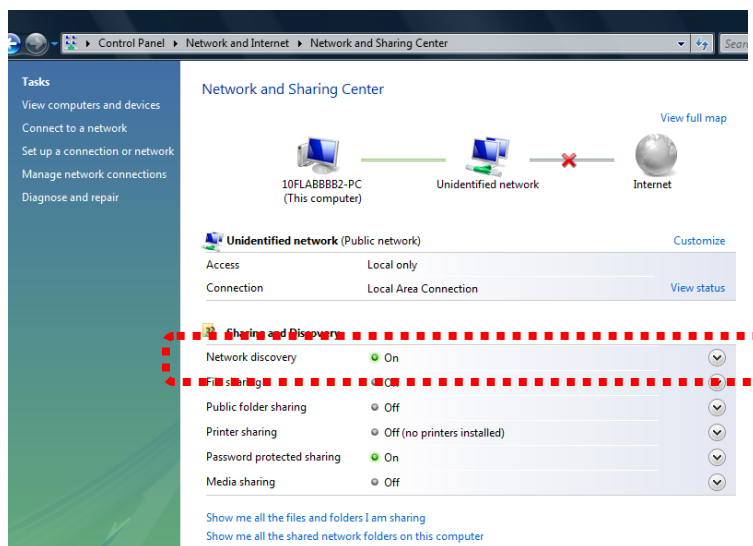
Double-click “**My Network Places**” on the desktop, the “My Network Places” will display on the screen and double-click the UPnP icon with Internet camera to view your device in an internet browser.



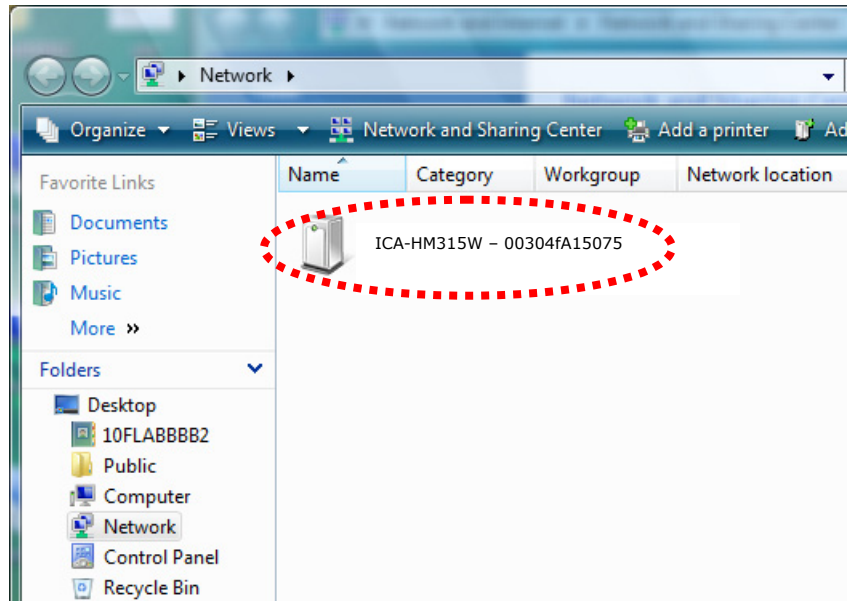
2.5.2 Windows Vista

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 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.



2.6 Install the Device behind a NAT Router

Once installed, the device is accessible on your LAN. To access the device from the Internet you must configure your broadband router to allow incoming data traffic to the device. If the device is installed on the LAN with a router, then it may get a dynamic IP address from the DHCP server. However, if the device wants to be accessed from the WAN, its IP address needs to be setup as fixed IP, also the port forwarding or Virtual Server function of router needs to be setup.

However, if your NAT router supports UPnP feature, it can be very easy to achieve NAT traversal automatically. To do this, enable the NAT-traversal feature, which will attempt to automatically configure the router to allow access to the camera.

Installing the device with an UPnP router on your network is an easy 3–step procedure:

- (1) Enable UPnP option of your NAT router
- (2) Enable UPnP NAT traversal option of the Network Camera (default)
- (3) Access your Network Camera by DIPS

(1) Enable UPnP option of your NAT router

To use UPnP IGD function (NAT traversal), you need to make sure the UPnP function is enabled in your router. Most new home routers should support this function. Some of routers are default enable and others are not. Please check user's manual of your NAT router for detail.

(2) Enable UPnP NAT traversal option of the Network Camera

Refer to **Setting → Network → UPnP** page for detail NAT traversal setting. Note that this option is default enabled.

(3) Access your Network Camera by DIPS

Refer to **Setting → System → System** page for detail DIPS information

2.7 Setup ActiveX to use the Internet Camera

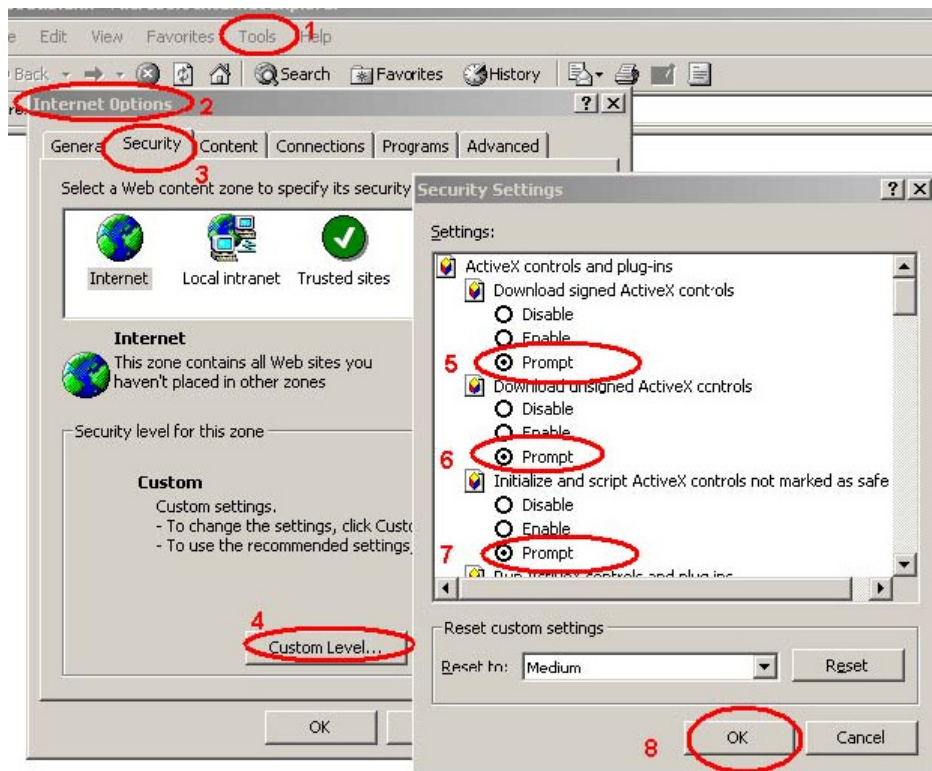
The Internet camera web pages communicate with the Internet camera using an ActiveX control. The ActiveX control must be downloaded from the Internet camera and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the Internet camera, user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

2.7.1 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



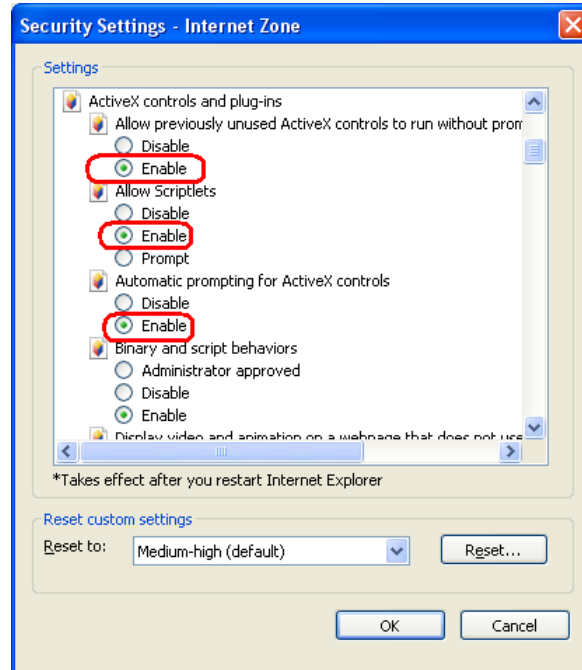
By now, you have finished your entire PC configuration for Internet camera.

2.7.2 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*

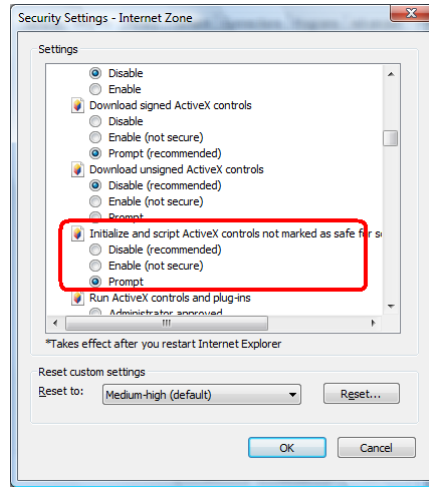
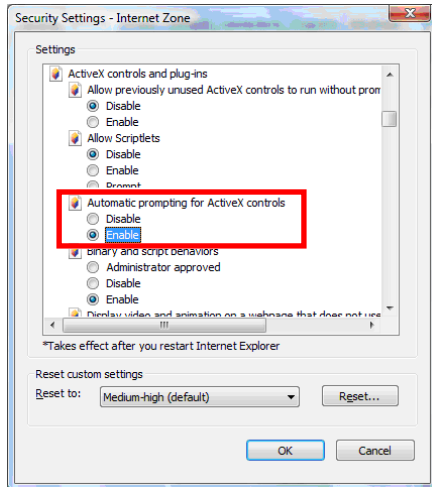


By now, you have finished your entire PC configuration for Internet camera.

2.7.3 Internet Explorer 7 for Windows Vista

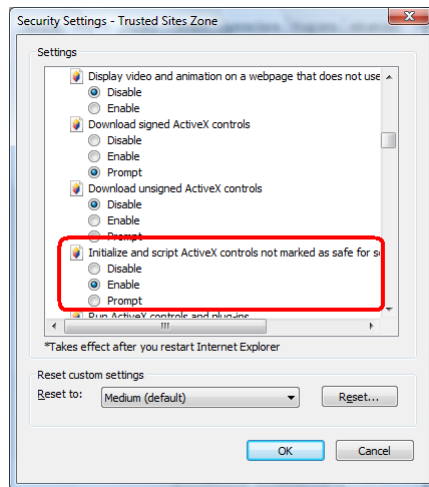
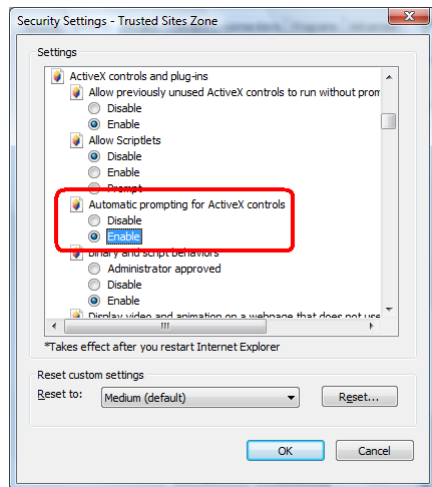
From your IE browse → "Tools" → "Internet Options..." → "Security" → "Internet" → "Custom Level...", please setup your "Settings" as follow.

- 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.

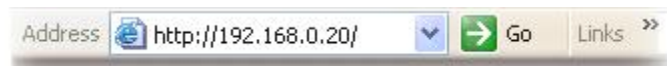
3.1 Introduction

The ICA-HM315W 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 PLANET 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.

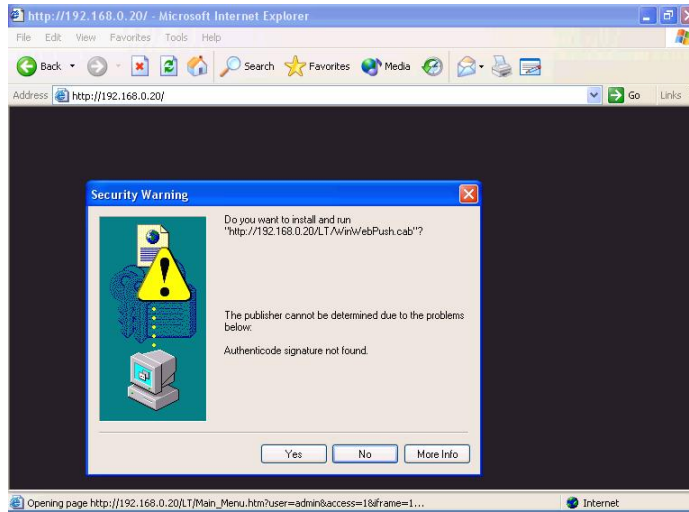
Start the web browser on the computer and type the IP address of the camera. The Default IP: "<http://192.168.0.20>"



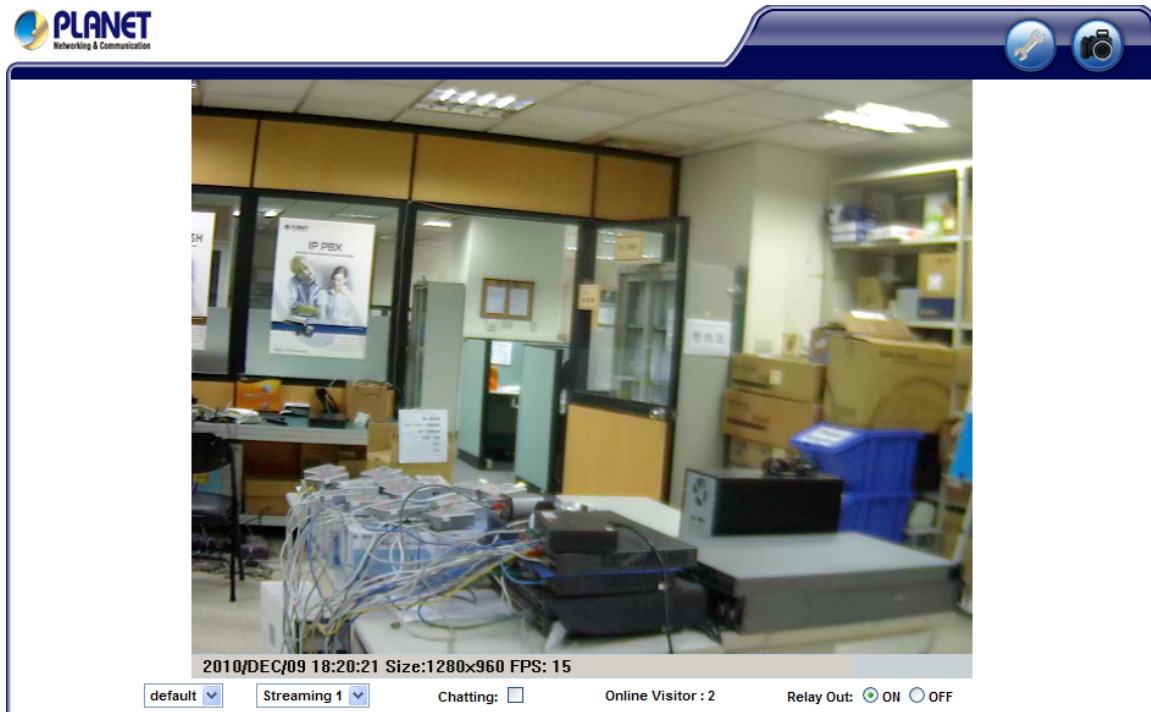
The login window of Internet camera will appear, Default login **username/password** is: **admin/admin**



Web browser may display the "Security Warning" 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.

3.3 Live View

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



4. Streaming Protocol

5. 2-way audio

6. Online Visitor

7. Control the relay

Configure	Get into the administration page	
	Item	Explanation
	System	System Information
	Network	IP Setting
	A/V Setting	Image Setting
	Event	IP Camera provides multiple event settings.
Snapshot	Video Snapshot	
Video Information	Show system time, video resolution, and video refreshing rate	

Streaming	Select video streaming source (When streaming 2 setting in 『Video Setting』 is closed, this function will not display)
2-way audio	IP Camera supports 2-way audio. Click the “Chatting” check box. Then you can use microphone which connects to the PC to talk to server side, which is IP Camera side
Online Visitor	Shows how many people connect to this IP 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.




Function	Explanation
Snapshot	Save a JPEG picture
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.
Mute	Turn of the audio. Click again to turn on it.
Full Screen	Full-screen mode.
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.


4. Configure

4.1 System- System Information

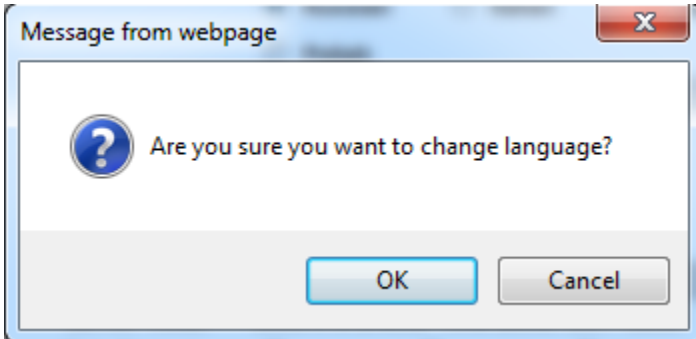


Click  to get into the administration page. Click



 to go back to the live video page.

Function	Explanation
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 PLANET IP Installer.
Select language	There are English, Traditional Chinese, and Simplified Chinese to select. When change language, it will show the following dialogue box for the confirmation of changing language.



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 "Upgrade" button to reserve the setting.



Server time setting

Select options to set up time - "NTP", "Synchronize with PC's time", "Manual", "The date and time remain the same".

Time Setting	
Server Time:	2000/4/17 4:28:57 Time Zone: GMT+08:00
Date Format:	<input checked="" type="radio"/> yy/mm/dd <input type="radio"/> mm/dd/yy <input type="radio"/> dd/mm/yy
Time Zone:	<input type="text" value="GMT+08:00"/>
<input type="radio"/> NTP :	
NTP Server :	<input type="text" value="198.123.30.132"/>
Update :	<input type="text" value="6"/> <input type="button" value="v"/> Hour
Time Shift :	<input type="text" value="0"/> Minutes [-1440..1440]
<input type="radio"/> Synchronize with PC's time	
Date :	<input type="text" value="2010/12/8"/>
Time :	<input type="text" value="13:44:26"/>
<input type="radio"/> Manual	
Date :	<input type="text" value="2010/12/8"/>
Time :	<input type="text" value="13:36:20"/>
<input checked="" type="radio"/> The date and time remain the same	

4.2 System- User Management

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

User Management

Anonymous User Login

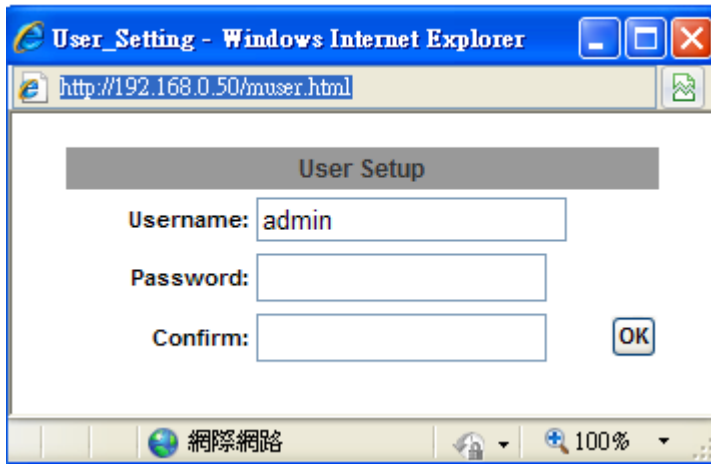
YES NO
 Setting

Add User

Username:
 Password:
 Confirm:
Add/Set

User List

Username	User Group	Modify	Remove
admin	Administrator	Edit	



Function	Explanation
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".
User List	Click "edit" or "delete" to modify the user.

4.3 System-System update

System Update	
Firmware Upgrade	
Firmware Version:	V1.0.18
New Firmware:	<input type="text"/> <input type="button" value="Browse..."/>
	<input type="button" value="Upgrade"/>
Reboot System	
	<input type="button" value="Start"/>
Factory Default	
	<input type="button" value="Start"/>
Setting Management	
Save As a File:	Right click the mouse button on <u>Setting Download</u> and then select Save As to save current system's setting in the PC.
New Setting File:	<input type="text"/> <input type="button" value="Browse..."/>
	<input type="button" value="Upgrade"/>

Function	Explanation
Firmware Upgrade	To update the firmware online, click "Browse..." to select the 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 download the current setting to PC, or upgrade from previous saved setting. 1. 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 2. Upgrade from previous setting Browse → search previous setting → open → upgrade → Setting update confirm → click <u>index.html</u> . to return to main page

4.4 Network- IP Setting

IP Setting

IP Assignment

DHCP
 Static

IP Address:
 Subnet Mask:
 Gateway:
 DNS 0:
 DNS 1:

Port Assignment

Web Page Port:
 RTSP Port :
 RTP Start Port: [1024..10000]
 RTP End port: [1025..10000]

UPnP

UPnP: Enabled Disabled
 UPnP Port Forwarding: Enabled Disabled
 External Web Port:
 External RTSP Port:

Function	Explanation
IP Assignment	1. DHCP : Using DHCP, IP Camera will get all the network parameters automatically. 2. Static IP : Please type in IP address, subnet mask, gateway, and DNS manually.
Port Assignment	User may need to assign different port to avoid conflict when 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 connecting. 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 automatically be detected and a new icon will be added to "My Network Places."

Note:	<p>UPnP must be enabled on your computer. Please follow the procedure to activate UPnP</p> <ol style="list-style-type: none"> 1. open the Control Panel from the Start Menu 2. select Add/Remove Programs 3. Select Add/Remove Windows Components and open Networking Services section 4. Click Details and select UPnP to setup the service 5. The IP device icon will be added to “MY Network Places” 6. User may double click the IP device icon to access IE browser
--------------	--

4.5 Network- PPPoE

PPPoE

PPPoE Setting

Enabled Disabled

Username:

Password:

Send mail after dialed

Enabled

Subject:

Function	Explanation
PPPoE Setting	Select “Enabled” to use PPPoE. Key-in Username and password for the ADSL connection.
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.

4.6 Network-DDNS

It supports “DDNS” (Dynamic DNS) and “Camddns service” service.

DDNS

DDNS Setting

Enabled Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update: **Minutes**

State

Note:

1. Schedule Update: Depends on the input time of Schedule Update, it will update DDNS's web site automatically. The time range is from 5 to 5000 minutes.
*0: It will not update.
2. dyndns.org & 3322.org: Update once per day is recommended (1440 minutes per day). If updated too frequently, it will be blocked.

Function	Explanation
DynDNS	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Please enable this service 2. Key-in user name. 3. IP Schedule update is default at 5 minutes. 4. Click “Apply”.
DDNS Status	<ol style="list-style-type: none"> 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

	<p>been used. Please change it.</p> <p>5. Update Failed, please check your internet connection : Network connection failed.</p> <p>6. Update Failed, please check the account information you provide : The server, user name, and password may be wrong.</p>
--	---

4.7 Network-Mail & FTP

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

Mail & FTP	
Mail Setting	
Login Method:	Account <input type="button" value="v"/>
Mail Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Sender's Mail:	<input type="text"/>
Receiver's Mail:	<input type="text"/>
Bcc Mail:	<input type="text"/>
Mail Port:	<input type="text"/> (Default 25)
	<input type="button" value="Test"/>
FTP Setting	
FTP Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Port:	<input type="text"/>
Path:	<input type="text"/>
Mode:	PORT <input type="button" value="v"/>
Create the folder:	Yes <input type="button" value="v"/> (ex:Path/20100115/121032m.avi)
	<input type="button" value="Test"/>
	<input type="button" value="Apply"/>

4.8 Wireless Setting

Wireless Setting			
Status of Wireless Networks			
SSID	Mode	Security	Signal Strength
CL-GUEST	Infrastructure	OFF	47
UMG_WIFI	Infrastructure	OFF	61
iRoot	Infrastructure	WEP	41
	Infrastructure	WEP	41
Wireless Setting			
MAC Address:	00:0D:F0:5B:1F:EA		
Mode:	Ad-hoc <input type="button" value="v"/>		
Operation Mode:	Auto <input type="button" value="v"/>		
SSID:	<input type="text"/>		
Channel:	6 <input type="button" value="v"/>		
Security:	WEP <input type="button" value="v"/>		
WEP Setting			
Authentication:	Open System <input type="button" value="v"/>		
Encryption:	64 bit <input type="button" value="v"/>		
Key Type:	HEX <input type="button" value="v"/> (10 character max)		
Key 1:	<input checked="" type="radio"/>	<input type="text"/>	
Key 2:	<input type="radio"/>	<input type="text"/>	
Key 3:	<input type="radio"/>	<input type="text"/>	
Key 4:	<input type="radio"/>	<input type="text"/>	
<input type="button" value="Apply"/>			

Wireless Setting	
Mode	There are Infrastructure and Ad-hoc. Infrastructure is for connecting with the router. Ad-hoc is for connecting with PC. There is "Channel" to select only when user uses Ad-hoc mode. e.g. If one PC's channel is 1, the other's channel has to 1, too.
SSID	Based on AP setting.
Channel	This is only be used when the user selects Ad-hoc mode in order to avoid conflict.
Security	It supports "None", "WEP", "WPA-PSK" security encryption based on the setting of the Router.
WEP Setting	

Authentication	There are Open System and Shared Keys, it is based on different encryptions. This has to be the same as the Router's setting.
Encryption	There are 64 bits and 128 bits. This is based on Key Type based on the Router's setting.
Key Type	There are HEX and ASCII. When selecting HEX, the user only can input 0~9 characters and use A, B, C, D, E, and F. When selecting ASCII, the user can input any character.
Key 1~4	Based on Key Type to input characters.

4.9 A/V Setting- Image Setting

Camera



Privacy Mask

Area 1
Area 2
Area 3
Save

Image Setting

Brightness: ▾

Contrast: ▾

Sharpness: ▾

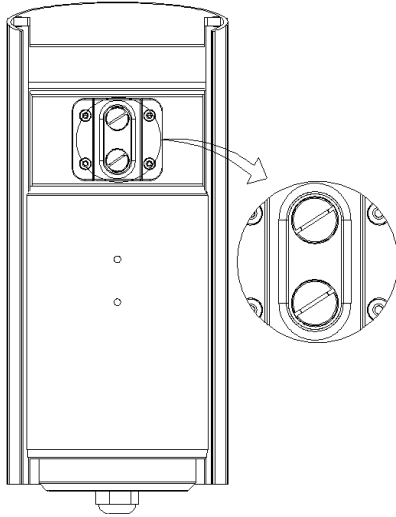
BLC: ON OFF

Night Mode: ▾

Video Orientation: Flip Mirror Default

Function	Explanation
Privacy Mask	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.
Image Setting	Adjust "Brightness", "Contrast", "Sharpness" to get clear video.
Back Light Compensation, Night Mode and "Video Orientation"	IP CAMERA supports "Back Light Compensation", "Night Mode" and "Video Orientation".

This IP camera belongs to external vari-focal lens adjustment camera. Please adjust “**ZOOM**” first and “**FOCUS**” in the following to complete the adjustment.



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
(Max Video Frame Rate for both streaming combined is 30 FPS)

4.10 A/V Setting- Video Setting

Video System: click the drop down list to select the Input Resolution, Video System and TV Output.

Video Setting

Input Resolution: 1600x1200 @ 15fps ▼

Video System: NTSC ▼

TV Output: Auto ▼ (Auto : Based on the Video System)

Stream 1/2 Setting (Basic Mode / Advanced Mode)

Streaming 1 Setting

Basic Mode Advanced Mode

Resolution: 1280x960 ▼

Quality: High ▼

Video Frame Rate: 15 FPS ▼

Video Format: JPEG ▼

RTSP Path: ex:rtsp://IP_Address/ Audio:G.711

Streaming 2 Setting

Basic Mode Advanced Mode

Resolution: 640x480 ▼

Quality: Standard ▼

Video Frame Rate: 15 FPS ▼

Video Format: JPEG ▼

RTSP Path: v2 ex:rtsp://IP_Address/v2 Audio:G.711

Streaming 1/2 Basic Mode	Resolution: There are 8 resolutions can be chosen. For example, 1600x1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144
	Quality: 1. There are 5 levels to adjust. Best/ High/ Standard/ Medium/ Low 2. 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 1/2 Advanced	Resolution: There are 8 resolutions can be chosen. For example, 1600x1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.

Mode	<p>Bitrate Control Mode:</p> <ol style="list-style-type: none"> 1. There are CBR (Constant Bit Rate) and VBR (Variable Bit Rate) to use. 2. CBR : 32Kbps~4Mbps (the higher the CBR is, the better the video quality is) 3. VBR : 1(Low)~10(High) – Compression rate, the higher the compression rate, the lower the picture quality is; vise versa. 4. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.
	<p>Video Frame Rate</p> <ol style="list-style-type: none"> 1. The video refreshing rate per second. 2. NTSC: Max 30 frames/second PAL: Max 25 frames/second
	<p>GOP Size: It means "Group of Pictures". The higher the GOP is, the better the quality is.</p>
	<p>Video Format:</p> <ol style="list-style-type: none"> 1.H.264 2.JPEG
	<p>RTSP Path: RTSP output connecting route</p>

GPP streaming mode

3GPP Streaming Setting

Enabled Disabled (Resolution=176x144, FPS=5, Format=MPEG4)

3GPP Path: ex:rtsp://IP_Address/3g Audio:AMR
ex:rtsp://IP_Address/3gx No Audio

3GPP Streaming	You can Enable or Disable 3GPP Streaming
3GPP	3GPP output name

Note: 3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format

4.11 A/V Setting- Audio

PLANET IP Camera supports 2-way audio. User can send audio from IP Camera Built-in mic to remote PC; User can also send audio from remote PC to IP Camera's external speaker.

1.

Audio

IP Camera to PC

Enabled Disabled

2.



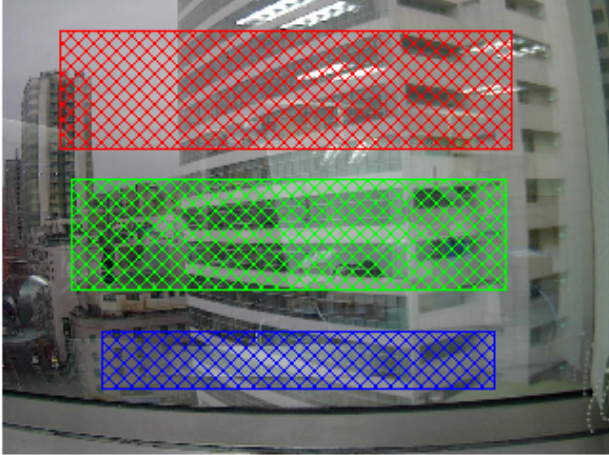
Audio from IP camera built-in mic to local PC	Select "Enable" to start this function.
Audio from local PC to IP Camera	Check "chatting" in the browsing page.

4.12 Event- Event Setting

PLANET IP Camera provides multiple event settings.

Event Setting

Motion Detection



Area Setting: Area 1 Area 2 Area 3

Sensitivity: 10(High) ▼ 10(High) ▼ 10(High) ▼

Area 1: E-mail FTP Out1

Area 2: E-mail FTP Out1

Area 3: E-mail FTP Out1

Subject:

Interval: 10 sec ▼ a period of time between every two motions detected.

Based on the schedule

Record File

File Format: JPEG Files(with Record Time Setting)*Only Straming 1 with JPEG video format. ▼

Record Time Setting

Pre Alarm: 5 sec ▼ Post Alarm: 5 sec ▼

Apply

Motion Detection	IP CAMERA allows 3 areas motion detection. When motion 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. To set up the motion area, click "Area Setting". Using mouse to drag and draw the area. The same operation for area 2 and 3.
Record File Setting	IP CAMERA allows 3 different types of recording file to change its record size. When motion/alarm is triggered, there are 3 different types of record mode. 1. AVI File (With Record File Setting) 2. Multi-JPEG (With Record File Setting), only with JPEG compression format. 3. Single JPEG (Single File with Interval Setting)

Record Time Setting	<p>Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered.</p> <p>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 will cause recording frame drop or decrease on post alarm recording time.</p>
----------------------------	---

4.13 Event-Schedule

After complete the schedule setup, the camera data will be recorded according to the schedule setup.

Schedule																								
All	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon.																								
Tue.																								
Wed.																								
Thu.																								
Fri.																								
Sat.																								
Sun.																								

With schedule setup.

Snapshot	
<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Snapshot: <input type="checkbox"/> E-mail <input type="checkbox"/> FTP	
Interval: <input style="width: 50px;" type="text" value="10"/> Second(s) [1..50000]	
File Name: <input style="width: 200px;" type="text" value="Snapshot"/>	

4.14 Event- I/O Setting

PLANET IP Camera 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, and trigger the relay.

I/O Setting

Input Setting

Input 1 Sensor:

Input 1 Action: E-mail FTP Out1

Subject:

Interval:

Based on the schedule

Output Setting

Mode Setting: OnOff Switch Time Switch

Interval:

CATUTION!! Please connect to propriety relay box to reduce the risk of electric shock & damaged.

Alarm Input Setting

By GPIO I/O port input that provide related action while I/O input triggered.

GPIO Output Setting

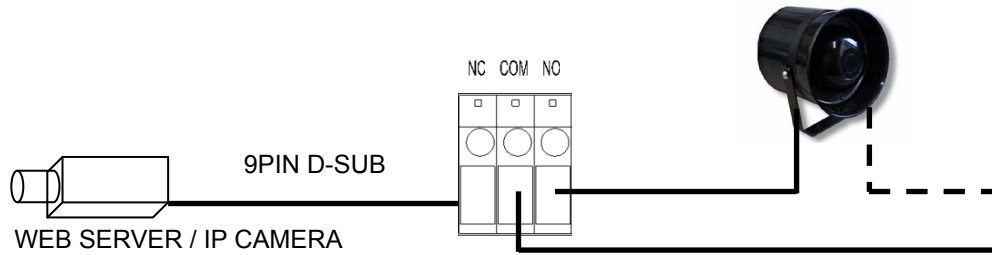
By GPIO I/O port output that provide “On” and “Off” Switch, Slide Switch & Pan/Tilt Module for using with relay box.

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

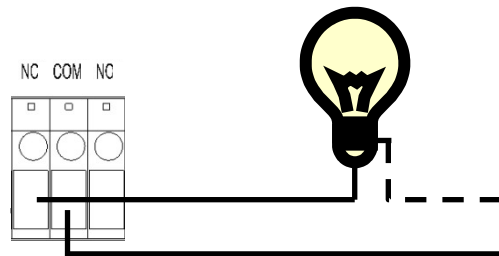
GPIO INSTALLATION EXAMPLE 1

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:



4.15 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.

Log List	
System Logs	Logs
Motion Detection Logs	Logs
I/O Logs	Logs
All Logs	Logs

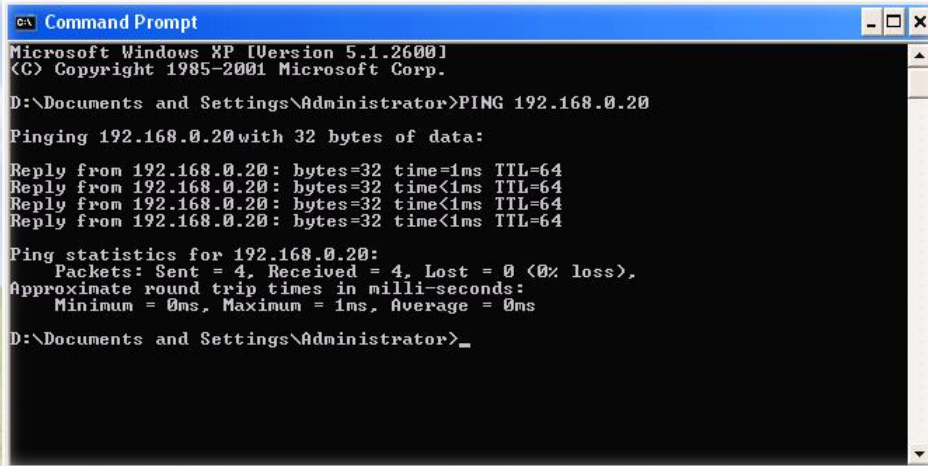
Appendix A PING IP Address

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 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.



```
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 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 B 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.
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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 C 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".

The screenshot shows the DynDNS website interface. At the top left is the DynDNS logo. Below it is a navigation menu with 'About', 'Services', and 'Account' tabs. On the left side, there is a 'My Account' section with a list of links: 'My Account', 'Create Account', 'Login', and 'Lost Password?'. The 'Create Account' link is circled in red. Below this is a search box labeled 'Search DynDNS' with a 'Search' button. On the right side, there is a 'Login' section with a message: 'It is strongly recommended that you visit this page'. Below this is a form for 'Account Login' with a 'Username:' label and an input field. At the bottom of the login section, there is a message: 'You must have cookies enabled'.

(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

The screenshot shows the 'Create Your DynDNS Account' page. At the top left is the DynDNS logo. On the right, there are 'User:' and 'Pass:' labels with input fields. Below this is a navigation menu with 'About', 'Services', 'Account', 'Support', and 'News' tabs. On the left side, there is a 'My Account' section with a list of links: 'My Account', 'Create Account', 'Login', and 'Lost Password?'. Below this is a search box labeled 'Search DynDNS' with a 'Search' button. The main content area is titled 'Create Your DynDNS Account' and contains the text: 'Please complete the form to create your free DynDNS Account.' Below this is a message: 'It is strongly recommended that you visit this page [securely](#). You are not currently visiting this page securely.' The form is titled 'User Information' and has five input fields: 'Username:', 'E-mail Address:', 'Confirm E-mail Address:', 'Password:', and 'Confirm Password:'. To the right of the 'E-mail Address' field, there is a note: 'Instructions: An activate your account will be sent to the e-mail address provided.' To the right of the 'Password' and 'Confirm Password' fields, there is a note: 'Your password needs to be more than 5 characters and cannot be the same as your username. Choose a password that is a common word, or can otherwise be easily guessed.' A red dashed circle highlights the 'Username', 'E-mail Address', 'Confirm E-mail Address', 'Password', and 'Confirm Password' fields.

Terms of Service

Please read the acceptable use policy (AUP) and accept it prior to creating your account. Also acknowledge that you may only have one (1) free account, and that creation of multiple free accounts will result in the deletion of all of your accounts.

Policy Last Modified: February 6, 2006

1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE

All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.

2. DESCRIPTION OF SERVICE

I agree to the AUP:

I will only create one (1) free account:

Click these two options

Next Step

After you click "Create Account", we will create your account and send you an e-mail to the address you provided. Please follow the instructions in that e-mail to confirm your account. You will need to confirm your account within 48 hours or we will automatically delete your account. (This helps prevent unwanted robots on our systems)

Create Account

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

Click to confirm

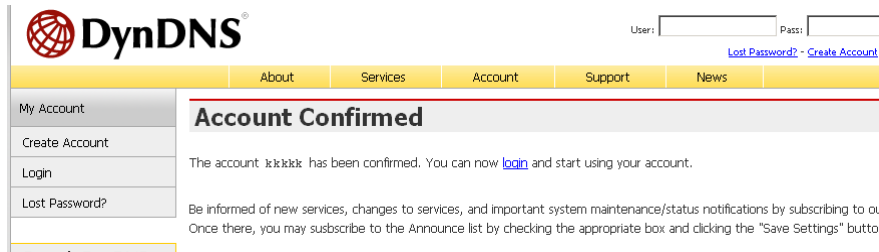
Your DynDNS Account 'kkkkk' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:

https://www.dyndns.com/account/confirm/oDDGDYN75qTJk_ICGba6vQ

Our basic service offerings are free, but they are supported by our paid services. See <http://www.dyndns.com/services/> for a full listing of all of our available services.

If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.

Sincerely,
The DynDNS Team



- (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.

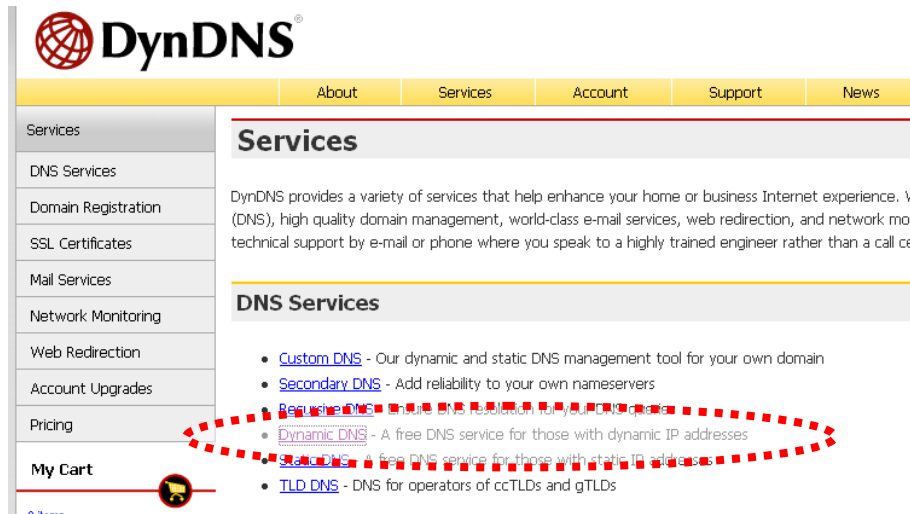


- (7). If the correct username and password are input, you can see the following picture at the top-right of the login page.

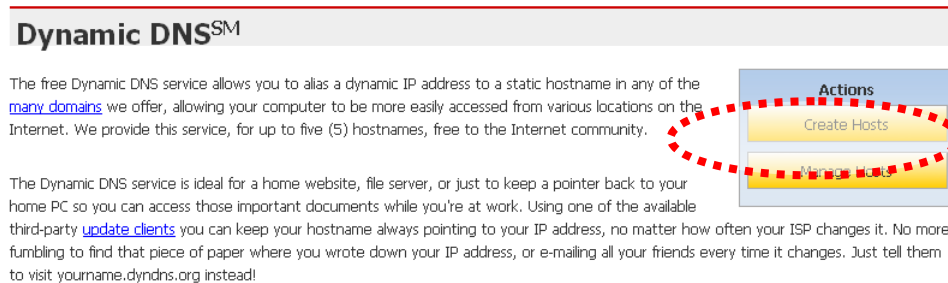
- (8). Click the "Services".



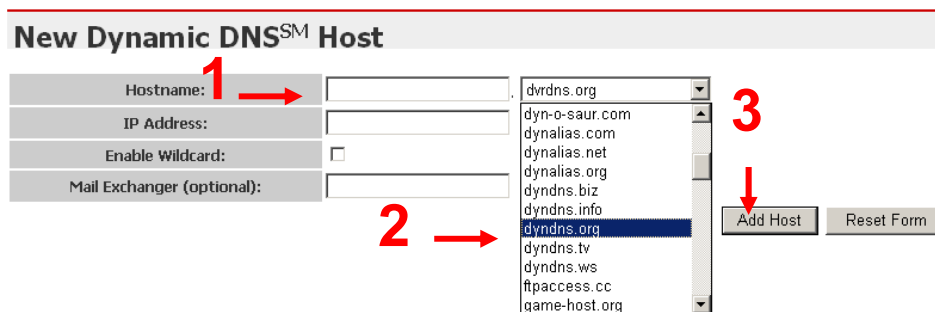
(9). Click the “Dynamic DNS”.



(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, users have to enter the web page 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 pages. After saving the modification, restart the device. The external users could browse the Networked Device by the input of their domain name.

Appendix D Troubleshooting & Frequently Asked Questions

Features	
The video and audio codec is adopted in the device.	<p>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.</p> <p>The audio codec is defined as AMR for 3GPP and G.711 for RTSP streaming.</p>
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	<p>Username = admin and Password = admin.</p> <p>Note that it's all case sensitivity.</p>
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.	<ul style="list-style-type: none"> ● 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	<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 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. <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 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 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 above procedure, reset Network Camera to default setting and installed it again.
Image or video does not appear in the main page.	<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.
How to check the device's ActiveX is installed on your computer	<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>
Internet Explorer displays the following message: "Your current security settings prohibit downloading ActiveX controls".	<p>Setup the IE security settings or configure the individual settings to allow downloading and scripting of ActiveX controls.</p>
The device work locally but not externally.	<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 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.	<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>
Frame rate is slower than the setting.	<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

	<p>not work correctly.</p> <ul style="list-style-type: none"> ● Ethernet switching hub can smooth the frame rate.
Blank screen or very slow video when audio is enabled.	<ul style="list-style-type: none"> ● 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.	<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 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.	<ul style="list-style-type: none"> ● If the object is dark, the image will flicker. Make the condition around the Camera brighter.

Appendix E Specifications

Product	ICA-HM315W
Camera Specification	
Sensor	2 Mega-Pixel CMOS Sensor
Lens / Focus Type	1/3.2" Vari-focal 3.6~16mm Lens
Gain Control	Auto
White Balance	Auto
BLC	Yes
Sensitivity	0Lux at IR on
IR Wavelength	850nm
ICR	Mechanism IR cut Filter
Digital Input/Output	1 In / 1 Relay Out
Video Out	BNC
Audio in / out	1 / 1
IR LED	Built-in 35 IR LED, IR Distance 20-25 M
Image (Video Setting)	
Video Encoder	H.264 / M-JPEG / MPEG4 (3GPP only)
Video Resolution	1600x1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144
Network and Configuration	
Network interface	1 x 10/100 Base-T RJ-45 port 1 x RP-SMA
Network Standard	IEEE 802.3 / IEEE 802.3u IEEE 802.11b/g
Security	WEP and WPA-PSK encryption
Networking Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP
Browser / Software	Microsoft ® Internet Explorer 6.0 or later , Cam Viewer 3 Lite/Pro
Hardware	
Dimension	83 (D) × 180 mm (L)
Power Supply	12 V DC, 1 A
Power Consumption	IR on:6.24W, IR off: 4.44W
Protection Class	IP-66 classification