

MESSOA

Network Camera

NDZ760

User Manual

201301 760 A1

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For AC Adaptor to avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a digital device, pursuant to Part 15 of the 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:

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

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Declaration of Conformity

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.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

NOTICE TO USERS

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We reserve the right to make any modification to this manual or the information contained herein at any time without notice. The software described herein may also be governed by the terms of a separate user license agreement.

Table of Contents

Overview	6
Introduction	6
Features	6
Minimum System Requirements.....	6
1. Package Contents	7
2. Physical Description	8
2.1 Front View.....	8
2.2 Rear View.....	9
3. Mounting the Camera	11
3.1 Ceiling Mount	11
3.2 Wall Mount.....	12
4. Install the Camera in LAN	13
5. Preparation	14
5.1 Search and Set up by IPWizard II	14
5.1.1 Search.....	14
5.1.2 View	14
5.1.3 LAN	16
5.1.4 Wireless (for wireless model only)	17
5.2 UPnP of Windows® XP, Vista or 7	21
5.3 Install the Device behind a NAT Router	22
5.4 Access the device from the Internet Explorer for the first time.....	23
5.5 Logging in as an User	24
5.6 Logging in as an Administrator.....	24
6. Operating the Network Camera	25
6.1 Monitor Image Section.....	25
6.2 Video Profile	25
6.3 Streaming Protocol.....	25
6.4 Language	25
6.5 2-Way Audio	26
6.6 Full Screen	26
6.7 PTZ Control	26
6.8 ActiveX Control.....	27
6.8.1 Digital Zoom.....	27
6.8.2 Snapshot.....	28
6.8.3 Record.....	28
6.8.4 Volume	28
6.8.5 About.....	29
7. Administrating the Device	30
7.1 System Setting	30
7.1.1 Network: Configure Network settings	30
7.1.1.1 Network.....	30
7.1.1.2 Wireless.....	32
7.1.1.3 IPv6	35
7.1.1.4 HTTPS	35
7.1.1.5 DDNS service	36
7.1.1.6 PPPoE	37
7.1.1.7 Streaming	38

7.1.1.8 UPnP	39
7.1.1.9 Bonjour	40
7.1.1.10 ONVIF	40
7.1.1.11 IP Filter.....	41
7.1.1.12 IP Notification.....	42
7.1.2 Camera: Adjust Camera parameters.....	44
7.1.2.1 Picture	44
7.1.2.2 Privacy Mask	45
7.1.2.3 Preset Setting	47
7.1.2.4 Tour Setting.....	47
7.1.3 System: Configure and maintain system.....	49
7.1.3.1 System:.....	49
7.1.3.2 Date & Time.....	50
7.1.3.3 Maintenance	51
7.1.4 Video: Configure profile	54
7.1.4.1 Common.....	54
7.1.4.2 Video Profile	55
7.1.4.3 ROI.....	56
7.1.5 Audio: Audio parameters	57
7.1.6 User: Manage user name, password and login privilege	58
7.1.7 E-Mail: Setup E-Mail configuration	58
7.1.8 Motion detection: Setup motion detection.....	60
7.1.9 Audio detection: Setup audio detection	61
7.1.10 Storage: Status and configuration of SD card.....	61
7.1.10.1 SD Card.....	61
7.1.10.2 SAMBA Server	63
7.1.11 Continuous Recording:	64
7.1.12 Recording List: Files list inside the SD Card.....	65
7.1.12.1 Recording List.....	65
7.1.12.2 Continuous Recording List	65
7.1.13 Event Server: Setup FTP/TCP/HTTP/SAMBA server configuration	66
7.1.13.1 FTP Server	66
7.1.13.2 TCP Server	67
7.1.13.3 HTTP Server	68
7.1.13.4 SAMBA Server	68
7.1.14 Event Schedule: Configure the event schedule.....	70
7.1.14.1 Setting	70
7.1.14.2 Record.....	73
7.1.14.3 Port Status	74
8. Using VLC Player to Access RTSP Streaming	75
9. Specification	77
Appendix A: Alarm I/O Connector	80

Overview

The 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.

Introduction

The device is accessible via the LAN or Internet connection. Connect your device 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 device to capture a video sequence to a PC.

Features

- ONVIF compliant
- Easy installation with setup wizard (IP Wizard II)
- UPnP device discovery and NAT router transversal for easy installation
- Wide and fast Pan range: 355 degree and 90 degree/sec
- Wide and fast Tilt range: 120 degree and 90 degree/sec
- Built-in 10 IR LEDs for night mode or low Lux. Environment
- Day and night function with ICR
- H.264 and MJPEG multi-profile compression simultaneously
- 1.3 Mega-pixel resolution
- 1.3 Mega-pixel or 720P mode selectable
- 8-profile encoder simultaneously
- UDP / TCP / HTTP / HTTPS protocols selectable
- IEEE 802.11n wireless LAN (WLAN model)
- WEP/WPA/WPA2-PSK wireless security (WLAN model)
- WPS by PBC mode for easy wireless setting
- Digital zoom
- Built-in microphone
- Audio line out
- Two-way audio
- Micro SD slot
- Intelligent motion detection up to 10 zones
- Voice alerting while event triggered
- Privacy masks
- 3D de-noise to improve picture quality at low lux.
- Go to preset once motion triggered
- Image transmission using an FTP or e-mail for event
- Digital sensor input and alarm output
- DDNS and PPPoE

Minimum System Requirements

- Microsoft Internet Explorer 6.0 or later
- Microsoft Media Player 11.0 or later (to playback recorded file)
- VGA Monitor resolution 1280 x 1024 or higher
- Pentium-4 3.6 GHz or higher
- Memory Size: 1GB or more
- Windows XP, Vista, 7

1. Package Contents

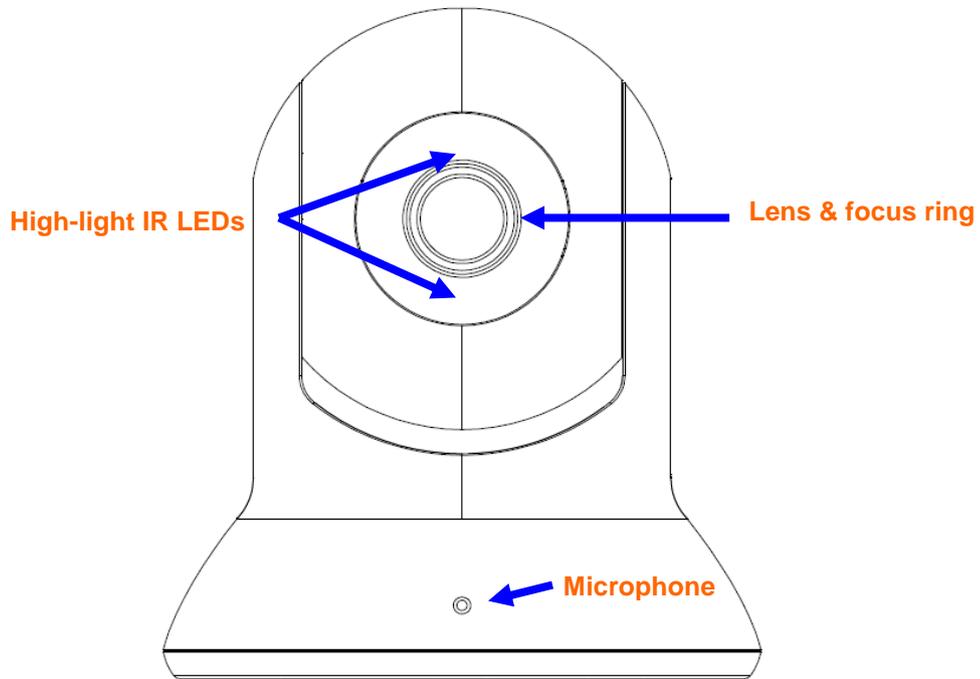
- Pan/ Tilt Network Camera
- CD-ROM (User manual and IP utility)
- Quick Start Guide
- Camera mounting kit
- Power adapter (DC12V)
- Detachable WLAN antenna (for WLAN model only)

If any of the above items are missing, please contact your dealer immediately.

Note: *Using a power supply with a different voltage than the one included with the Network Camera will cause damage and void the warranty for this product.*

2. Physical Description

2.1 Front View



High-light IR LEDs

These LEDs are white-light type. It's very useful for low-lux environment to provide supplementary light source for image sensor.

Lens & focus ring

User could use this ring to adjust focus manually.

Microphone

The Camera has built-in an internal microphone. This microphone is hidden in the pinhole located on the front panel.

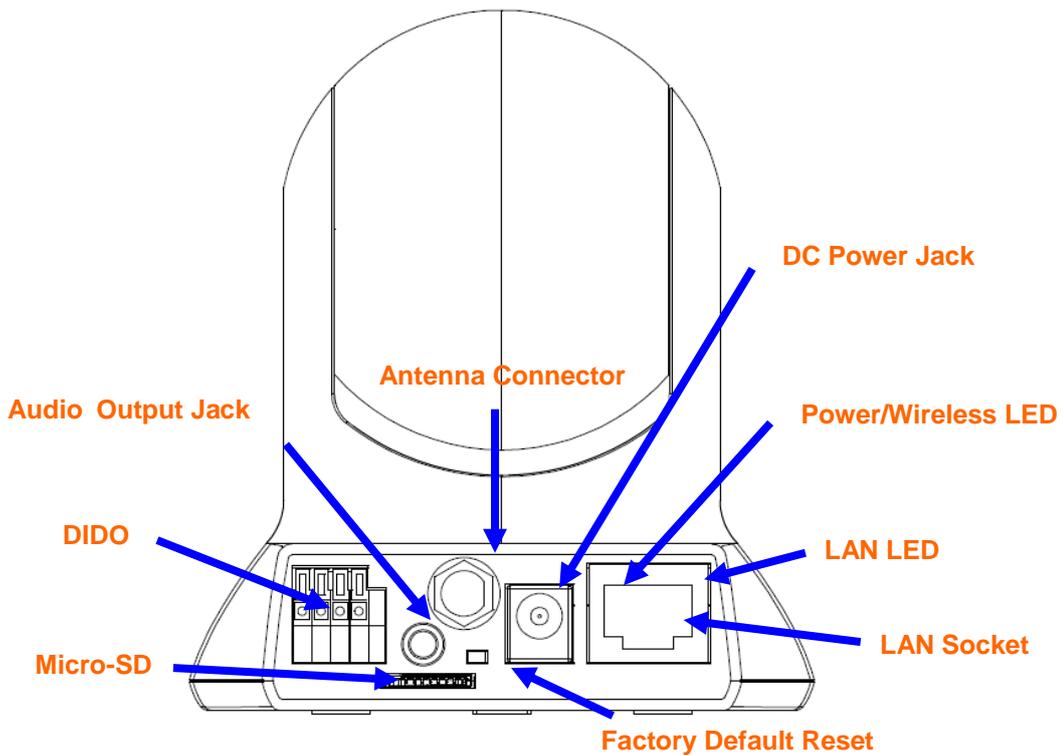
2.2 Rear View

Audio Output Jack

Audio-out Jack allows this device to output audio or alerting sound.

DC Power Jack

The input power is 12VDC. **Note** that supply the power to the Camera with the power adapter included in package. Otherwise, the improper power adapter may damage the unit and result in danger.



Antenna Connector (for WLAN model)

User can attach the included antenna to this connector (SMA type) or use another high-gain antenna to get higher performance.

Factory Default Reset

This button is hidden in the pinhole. This button is used to restore the all factory default settings. Sometimes restarting the camera will make the system back to a normal state. If the system still got problems after restart, user can restore the factory default settings and install it again. To restore the device, please follow the steps below:

1. Make sure the Camera is ready first. Insert the paper clip or other tool and press and hold the button down continuously.
2. Hold it at least 5 seconds and release the tool while the Camera is operating. Then the device has been restored to default settings and reboot again.

Note: Restoring the factory default setting will lose the all previous settings included IP address forever. User needs to run the IPWizard II program to search the device and configure it to let the device work properly again.

LAN Socket

The LAN socket is a RJ-45 connector for connections 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 Category 5 cable to connect the

Network Camera to a 100Mbps Fast Ethernet network switch or hub.

LAN LED (green color)

This LED will be flashing while network accessing via Ethernet.

System / Wireless LED (orange color)

This LED is used to indicate whether the Camera is ready or not. In addition, this LED will be flashing while the wireless accessing of the Camera (WLAN model only).

DI/DO Connector

The Camera provides a terminal block with 4 pins of connectors for DI and DO. Please refer to the Appendix A in this manual for more information. The pin 1 is located at the left side of terminal block from rear view.

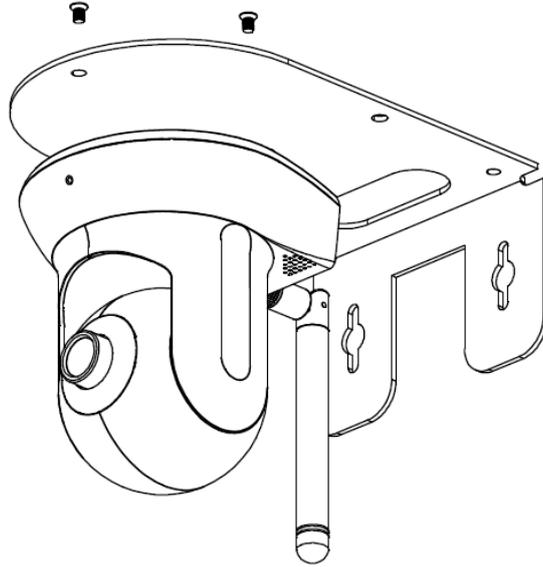
Micro SD Card Slot

User can insert a micro SD card into this slot for event recording.

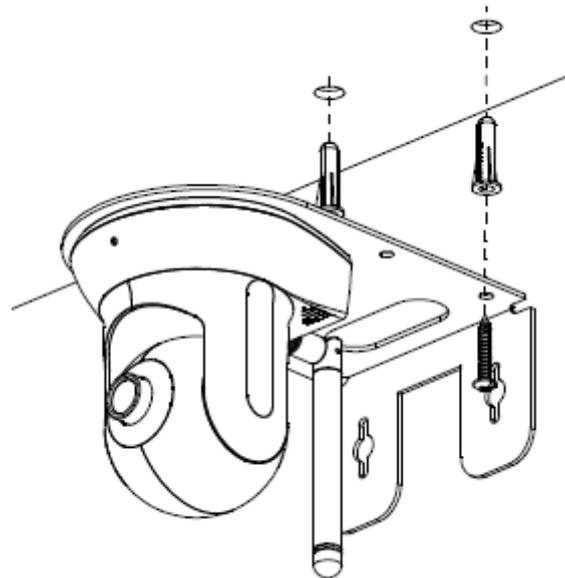
3. Mounting the Camera

3.1 Ceiling Mount

1. Fix the camera to L-type bracket with the two supplied screws

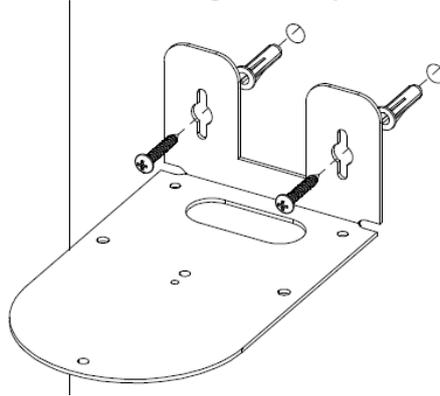


2. Fix the bracket and camera to the ceiling using two holly wall anchors and screws

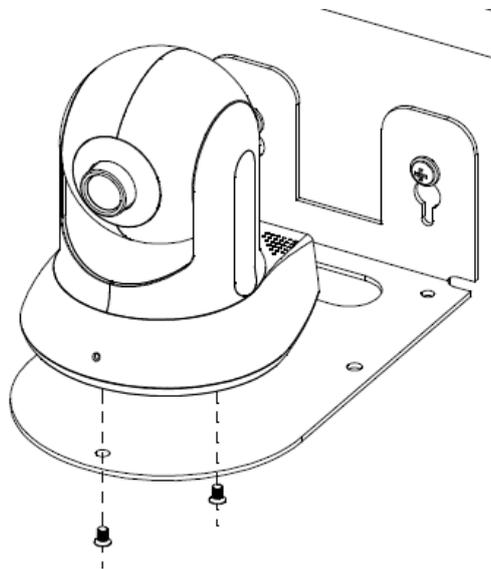


3.2 Wall Mount

1. Fix the L-type bracket to the wall using two holly wall anchors and screws



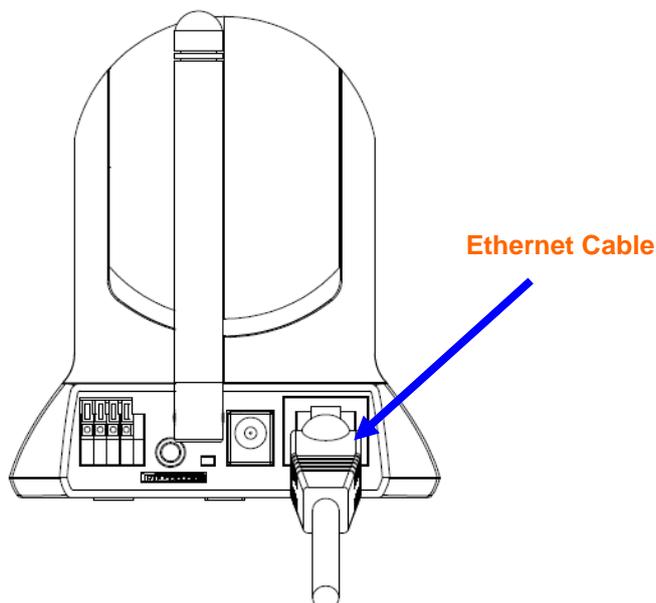
2. Fix the camera to L-type bracket with the two supplied screws



4. Install the Camera in LAN

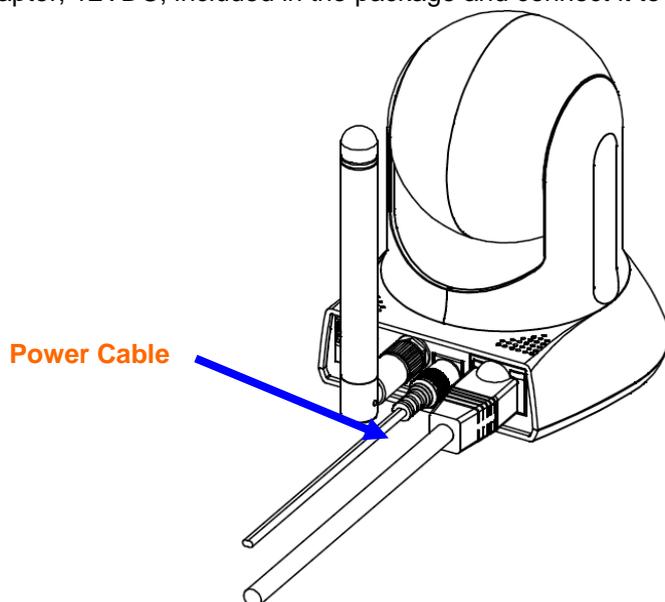
1. Plug an Ethernet cable into the Camera

Connect an Ethernet cable to the LAN socket located on the camera's rear and attach it to the network.



2. Connect the external power supply to Camera

Connect the attached power adapter to the DC power jack of the camera. **Note:** Use the power adapter, 12VDC, included in the package and connect it to wall outlet for AC power.



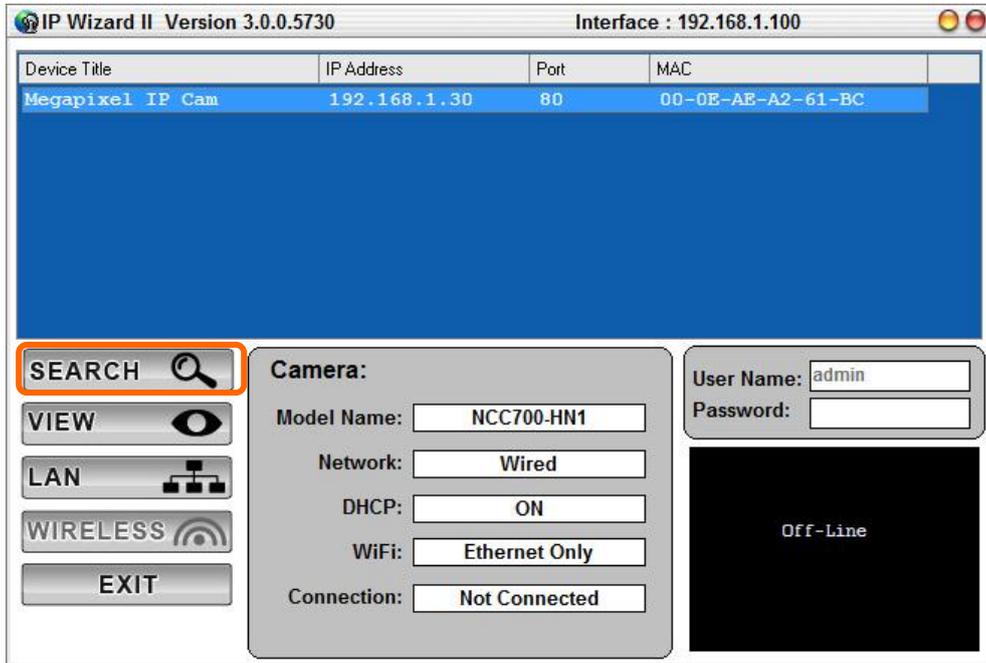
Once you have installed the camera well and powered it on, the Power LED (orange) will turn on later. Once the Power LED turned on, it means the system is booting up successfully. Furthermore, if you have a proper network connection, and access to the camera, the LAN LED (green) will flash green under wired mode.

5. Preparation

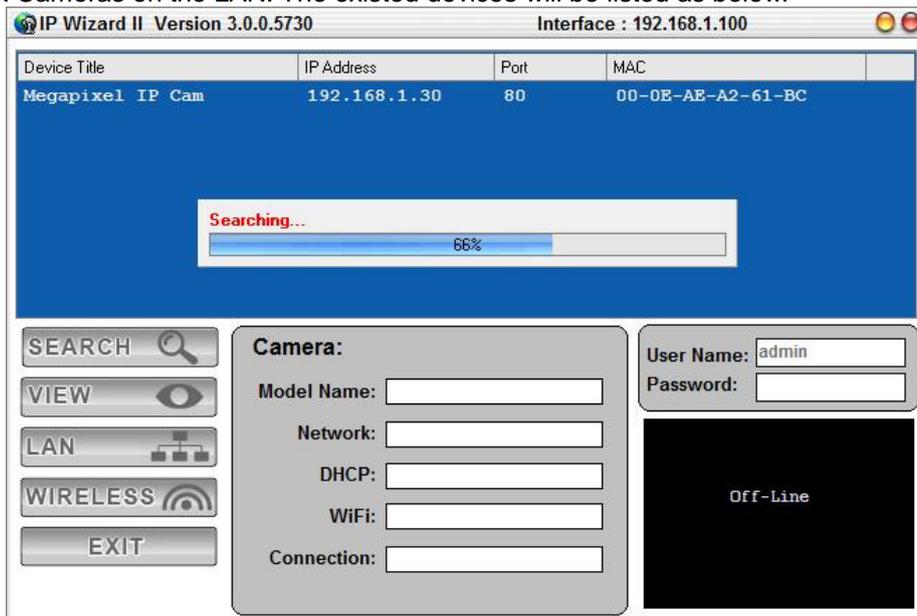
5.1 Search and Set up by IPWizard II

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

5.1.1 Search



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

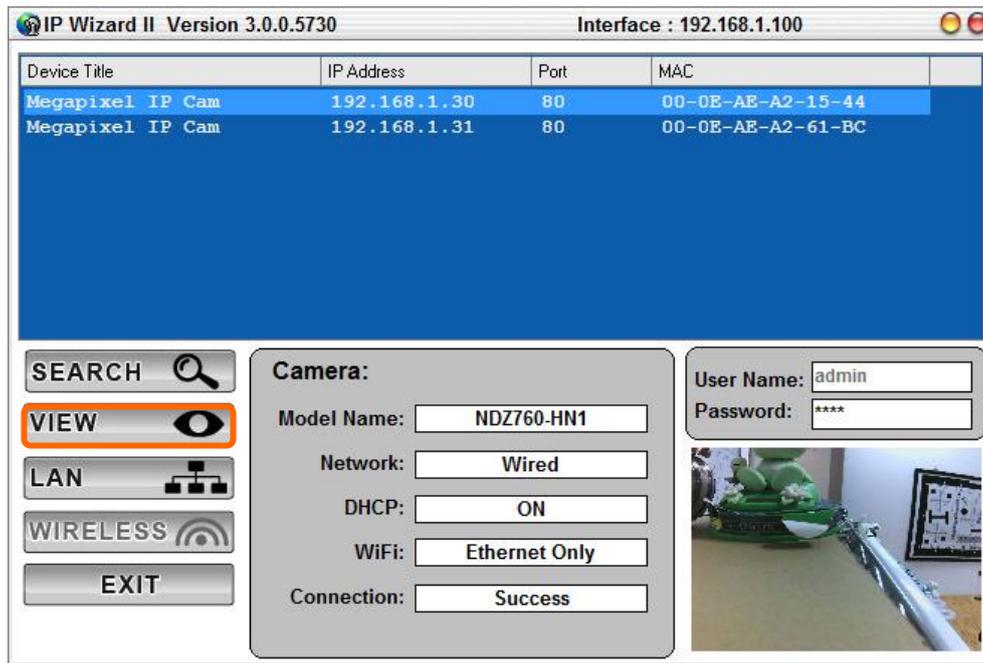


5.1.2 View

If IPWizard II finds network devices, **View** button will be available. Please select the device you want to view and click the **View** button. Then you could see the video from camera directly. Furthermore you could double click the left button of mouse to link to the network

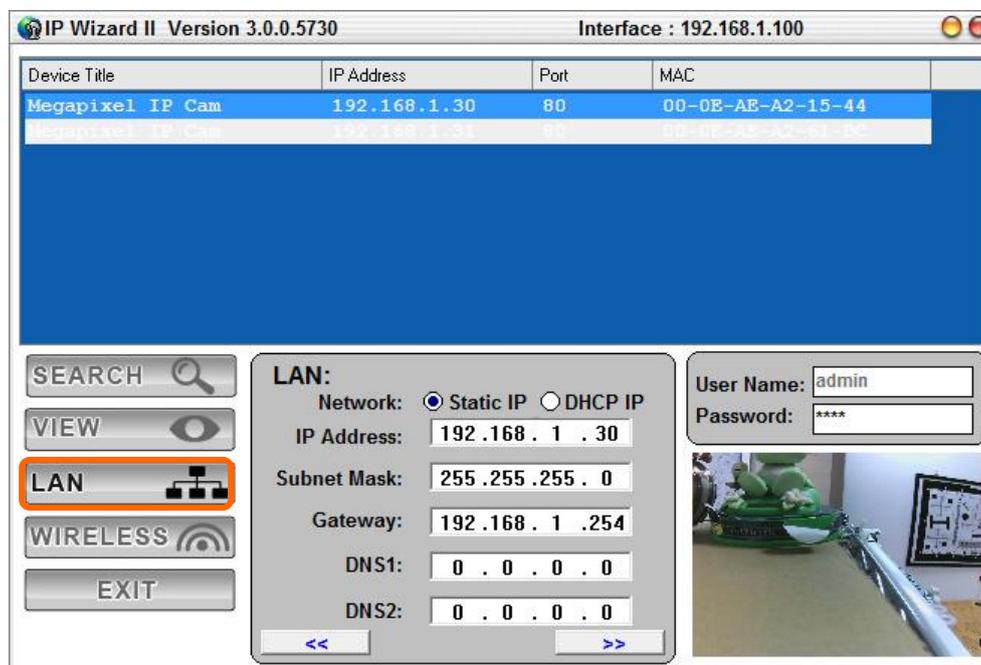
Network Camera User's Guide

device by browser.

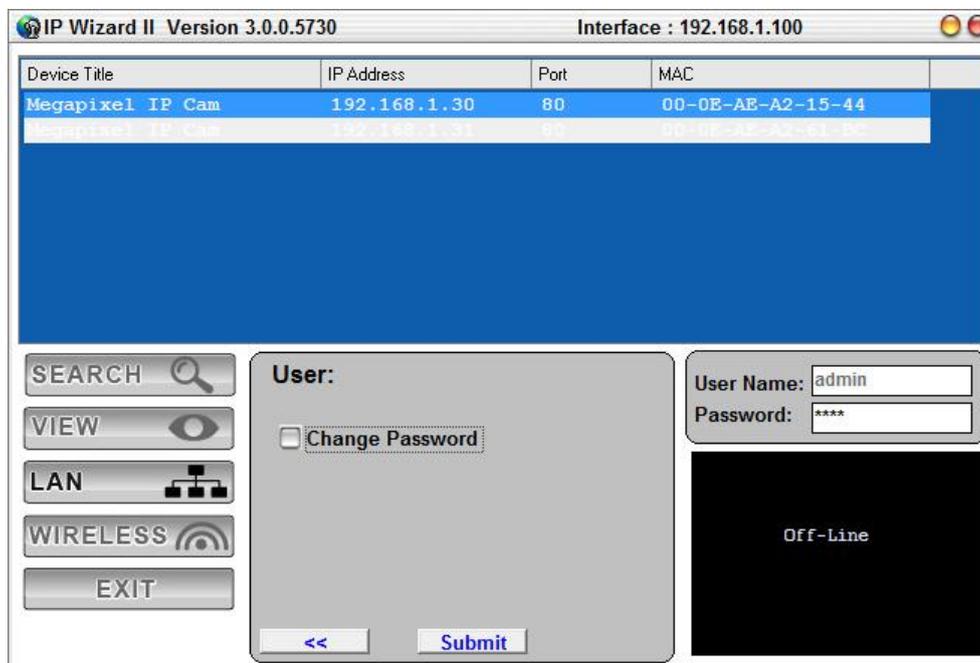


5.1.3 LAN

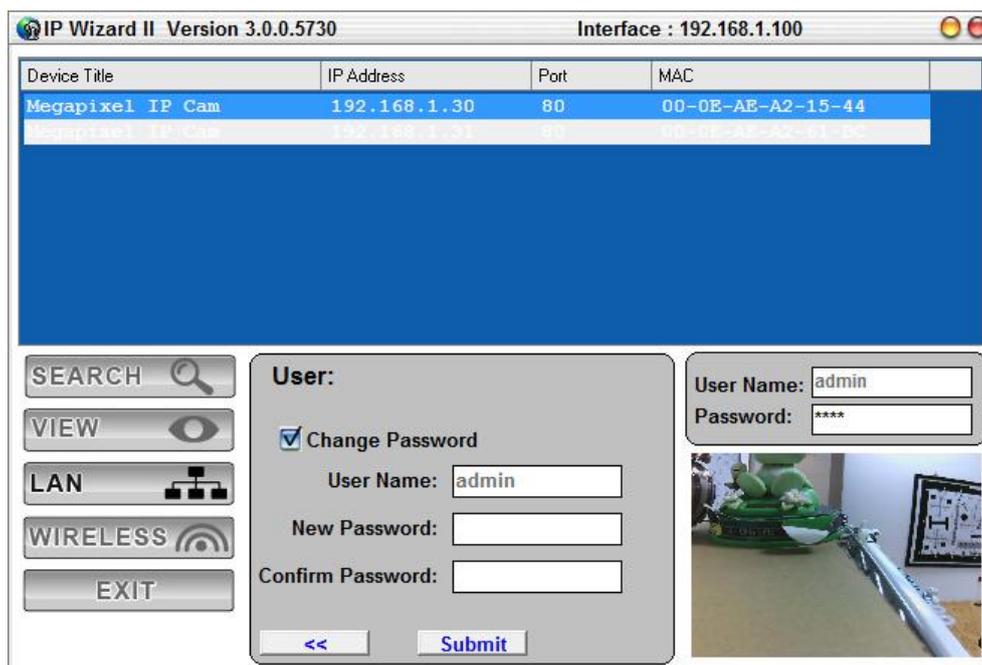
In case you want to change the IP related parameters of wired interface, please select the device you want to configure and click the **LAN** button. Relative settings will be carried out as below.



You could modify the relative settings of the selected device. Click “<<” button will quit the LAN setting procedure and click “>>” button will move to next page as below.

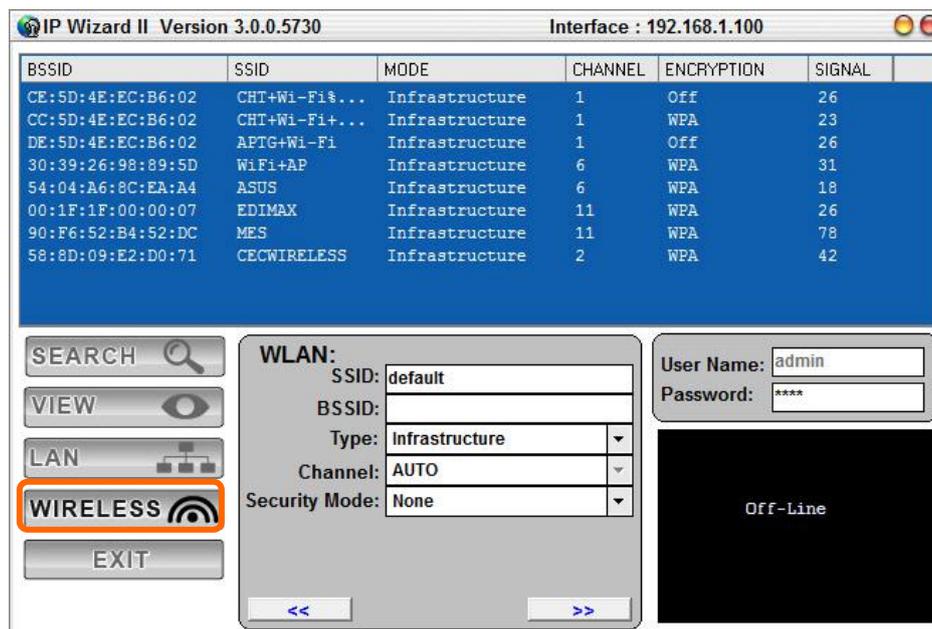


In case, you do not want to change username and/or password, then just click “Submit” button to perform your setting accordingly. Click “<<” button will go back to previous page. If you like to change username and/or password of the device, just click the check button. Then, the related fields will show up as below.



After keying in new username and password, click “Submit” button to perform your setting accordingly. Click “<<” button will go back to previous page.

5.1.4 Wireless (for wireless model only)



In case you want to change the IP related parameters of wireless interface, please select the device you want to configure and click the **WIRELESS** button. Relative settings will be carried out as above.

Click SSID to select your wireless AP or router and key in WEP or WPA key.

Network Camera User's Guide

BSSID	SSID	MODE	CHANNEL	ENCRYPTION	SIGNAL
CE:5D:4E:EC:B6:02	CHI+Wi-Fi...	Infrastructure	1	Off	26
CC:5D:4E:EC:B6:02	CHI+Wi-Fi...	Infrastructure	1	WPA	23
DE:5D:4E:EC:B6:02	APTG+Wi-Fi	Infrastructure	1	Off	26
30:39:26:98:89:5D	WiFi+AP	Infrastructure	6	WPA	31
54:04:A6:8C:EA:A4	ASUS	Infrastructure	6	WPA	18
00:1F:1F:00:00:07	EDIMAX	Infrastructure	11	WPA	26
90:F6:52:B4:52:DC	MES	Infrastructure	11	WPA	78
58:8D:09:E2:D0:71	CECWIRELESS	Infrastructure	2	WPA	42

SEARCH

VIEW

LAN

WIRELESS

EXIT

WLAN:
SSID: WiFi+AP
BSSID: 30:39:26:98:89:5D
Type: Infrastructure
Channel: AUTO
Security Mode: WPA_PSK/WPA2_PSK
WPA Mode: TKIP
WPA Key:
(ASCII: 8-63 Digits; HEX: 64 Digits)

User Name: admin
Password: ****

Off-Line

<< Submit >>

Click >> to next step:

BSSID	SSID	MODE	CHANNEL	ENCRYPTION	SIGNAL
00:0B:07:0C:AD:2C	default	Infrastructure	9	Off	66
00:A0:B0:DD:74:70	AMTK	Infrastructure	1	WPA	60
00:B0:0C:01:2C:18	default-R	Infrastructure	1	WPA	100
00:B0:0C:01:4B:90	AMTK-DEMO	Infrastructure	1	WPA	43
00:0A:79:D1:81:A0	ABC	Infrastructure	1	WEP	26
00:A0:B0:DD:74:71		Infrastructure	1	Off	70
00:26:18:6A:88:1F	Jason	Infrastructure	1	Off	26
00:26:87:01:24:8C	00268701248C	Infrastructure	4	WPA	20
06:26:87:01:24:8C	SQA-Andrea	Infrastructure	4	WEP	53
F0:7D:68:8C:45:FA	dlink-Tom-...	Infrastructure	6	WPA	50

SEARCH

VIEW

LAN

WIRELESS

EXIT

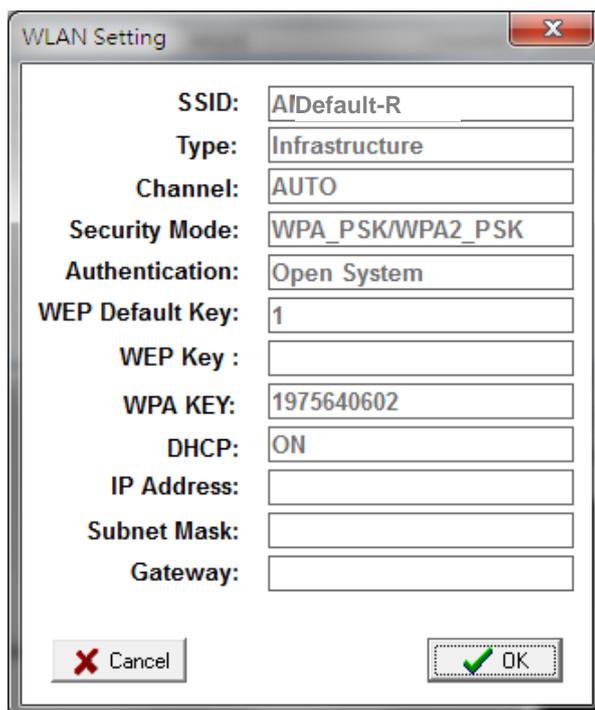
WLAN:
Network: Static IP DHCP IP
IP Address: 192.168.1.10
Subnet Mask: 255.255.255.0
Gateway: 192.168.1.1
Interface Mode: Wired only Auto

User Name: admin
Password:

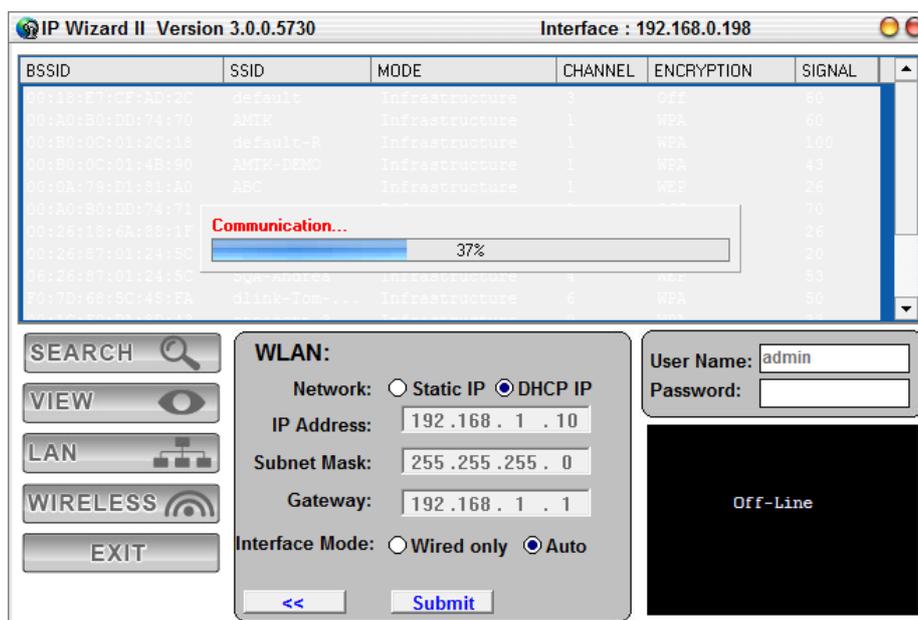
Off-Line

<< Submit >>

Make sure wireless setting and then submit it.



Click **OK** to confirm these parameters, then IPWizard II will start to configure this camera with specified information.



Once this step finished, IPWizard II will prompt you to unplug the Ethernet cable to activate wireless access. Then IPWizard II will prompt you to test wireless setting or finish wireless procedure as below.

Network Camera User's Guide

IP Wizard II Version 3.0.0.5730 Interface : 192.168.0.198

BSSID	SSID	MODE	CHANNEL	ENCRYPTION	SIGNAL
0:18:E7:CF:AD:2C	default	Infrastructure	3	Off	60
0:A0:B0:DD:74:70	AMTK	Infrastructure	1	WPA	60
0:B0:0C:01:2C:18	default-R	Infrastructure	1	WPA	100
0:B0:0C:01:48:90	AMTK-DEMO	Infrastructure	1	WPA	43
0:0A:79:D1:81:A0	ABC	Infrastructure	1	WEP	26
0:A0:B0:DD:74:71		Infrastructure	1	Off	70
0:26:18:EA:88:1F	Jason	Infrastructure	1	Off	26
0:26:87:01:24:5C	00268701245D	Infrastructure	4	WPA	20
6:26:87:01:24:5C	SQA-Andrea	Infrastructure	4	WEP	53
0:7D:68:5C:45:FA	dlink-Tom-...	Infrastructure	6	WPA	50

SEARCH 

VIEW 

LAN 

WIRELESS 

EXIT

WLAN:

MAC:

User Name:

Password:

Off-Line

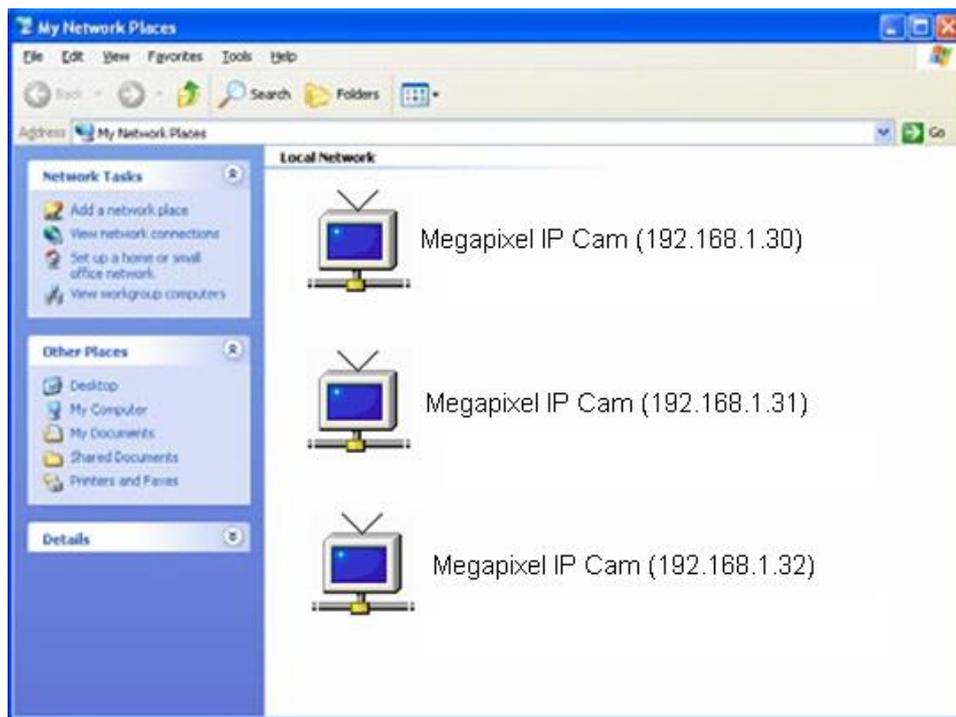
5.2 UPnP of Windows® XP, Vista or 7

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, Vista or 7, of your PC is UPnP enabled, the Network Camera will be very easy to be found.

Please make sure to enable UPnP settings first if your operating system of PC is running Windows XP.

Note: Windows 2000 does not support UPnP feature.

To discover your device, go to your Desktop and click **My Network Places**.



Click the targeted **Device**. Then Internet Explorer will connect to this Network Camera automatically.

5.3 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.

5.4 Access the device from the Internet Explorer for the first time

1. Start the web browser on the computer and type the IP address of the Camera you want to monitor as below:



The Login Window of the Camera is prompted:

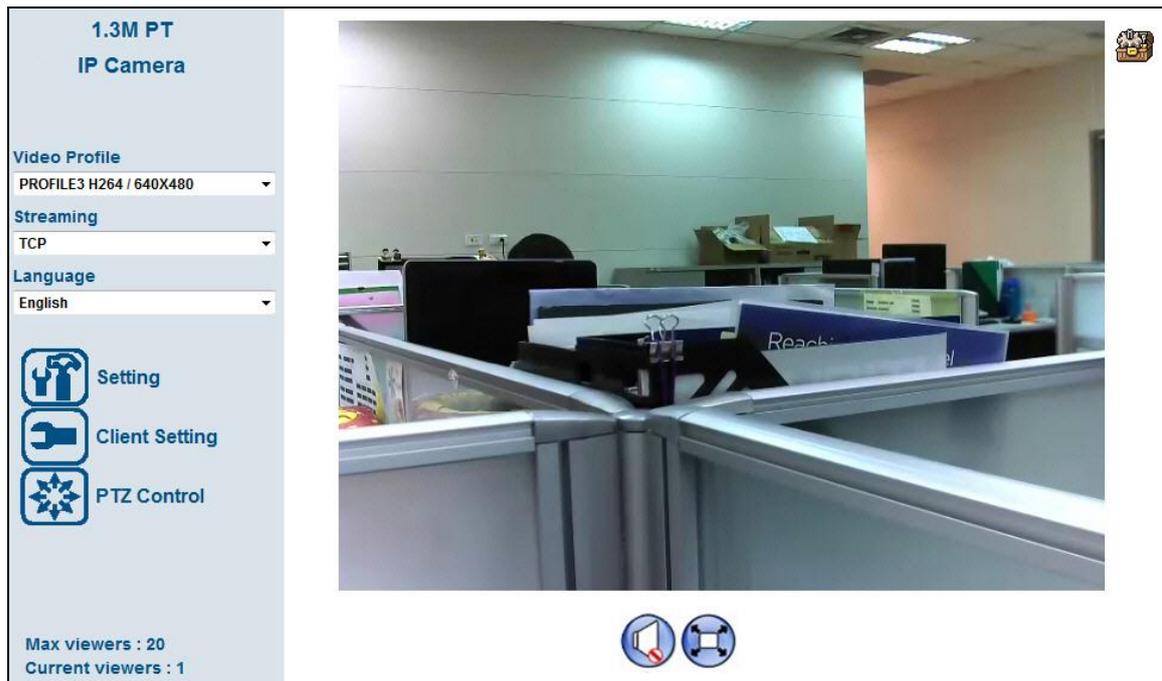


2. Type in your login name and password under "USERNAME" and "PASSWORD" textbox.

For the first time use (default value), input the
User Name: **admin**
Password: **1234**

That's, type in "**admin**" on the "USERNAME" as a default name and leave PASSWORD textbox blank. Click "OK" button to start the main menu.

3. According your browser's security setting, the IE Web Page may prompt the "Security Warning" window. If so, select "Yes" to install and run the ActiveX control into your PC. Otherwise, the system will load the ActiveX silently.
4. After the ActiveX control was installed and ran, the first image will be displayed.



5.5 Logging in as an User

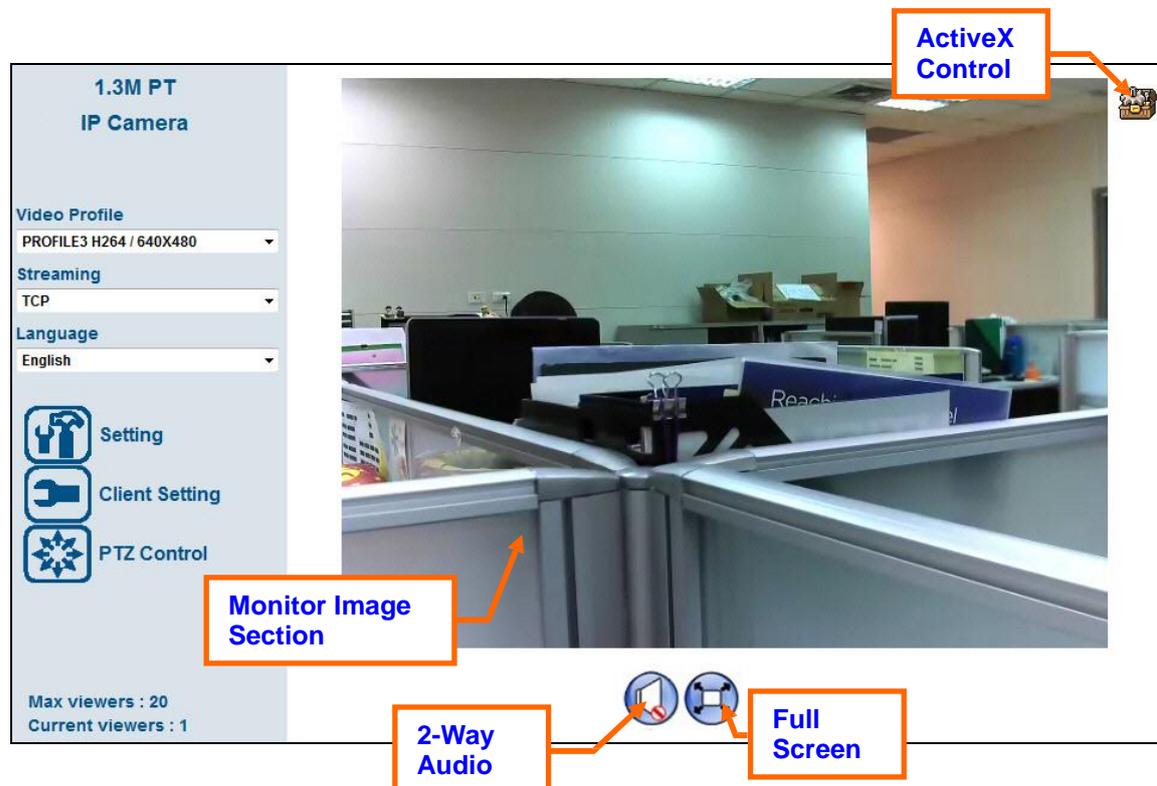
If you log in the Camera as an ordinary User, “Setting” function will be not accessible.

5.6 Logging in as an Administrator

If you log in the Camera as the Administrator, you can perform all the settings provided by the device.

6. Operating the Network Camera

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



6.1 Monitor Image Section

The image shot by the device is shown here. The date and time are displayed at the top of the window.

6.2 Video Profile

The device supports multi-profile function for H.264 and MJPEG simultaneously. User can chose the proper and/or preferred profile which is listed here.

6.3 Streaming Protocol

User can select proper streaming protocol according to networking environment.

6.4 Language

The device could provide multiple languages to meet customer's requirement.

6.5 2-Way Audio

The device supports 2-way audio function. User can chose to enable or disable this function by toggling the icon below.

	Disable audio uploading function.
	Enable audio uploading function.

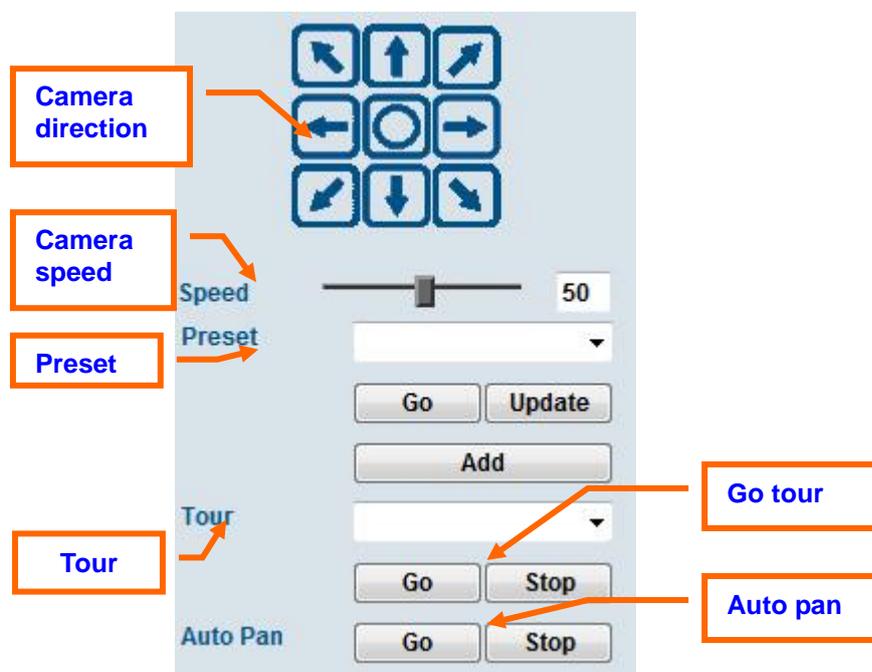
6.6 Full Screen

Enlarge video to full screen display.

	Enlarge video to full screen display. Press "ESC" key to disable this function.
---	---

6.7 PTZ Control

Click to display the following control panel:



Camera direction:

Control camera up/down/left/right and home position.

Camera speed:

Choose the speed of Pan and Tilt.

Preset:

Add/Update the preset positions or go to one of these positions.

Tour:

Select one of the camera tours. Camera tour is comprised by series of preset locations.

Go tour:

Execute the selected camera tour.

Auto Pan:

Execute the auto pan of camera. While auto pan is running, the camera will swing the camera automatically. Note that the speed of auto pan is fixed and can not be adjustable.

6.8 ActiveX Control

The plug-in ActiveX control supports a lot of functions by clicking the left mouse button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.

On the ActiveX control icon, click the Left Mouse Button, then a menu pop-up. This menu provides features that are unique to the ActiveX control. These features include: **“Digital Zoom”**, **“Snapshot”**, **“Record”**, **“Volume”**, **“About”**



6.8.1 Digital Zoom



Click **Digital Zoom** to activate this function as above. User can drag or scale the box over the video to adjust zoom ratio and position.

6.8.2 Snapshot



Click **Snapshot** to activate this function. Press **Snapshot** button to take a picture. The image file is saved as JPEG format into your local PC. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

If you like to retrieve the saved image, select the file to display the saved image by using any one of graph editing tools.

6.8.3 Record



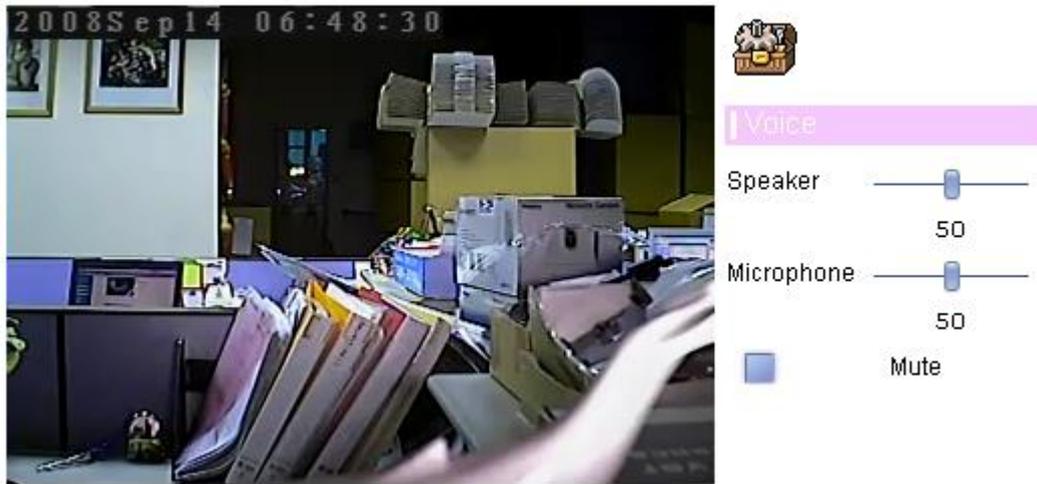
Click **Record** to activate this function. Press **Record** button to start recording. The video file is saved as ASF format into your local PC. While you want to stop it, press **Stop** to stop recording. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

After stop recording, list the files, this file is named as Video_yyyymmddhhmmss.avi

The ASF files can be display by the standard Windows Media Player, but it needs the DirectX 9.0 or later version to be installed.

6.8.4 Volume

Click **Volume** to activate this function. There are two control bars for speaker and microphone volume respectively. Scroll these control bars to adjust the audio attribute. Check the volume mute will mute the speaker output.



6.8.5 About



Click **About** to show this ActiveX information.

7. Administrating the Device

7.1 System Setting

This function is only available for user logged into Camera as administrator.

Click on each menu name to display its setting page.

Item	Action
Network	Configure Network settings such as DHCP, DDNS, 3GPP, PPPoE and UPnP
Camera	Adjust camera parameters, position, and set camera tour
System	Configure system information, date & time, maintenance, and view system log file.
Video	Configure bit rate and frame rate of video profiles
Audio	Configure audio parameters
User	Setup user name, password and login privilege
E-Mail	Setup E-Mail configuration
Motion Detection	Setup Motion detection
Storage	Status and configuration of SD card
Continuous Recording	Configure storage type and path
Recording List	Files list inside the SD Card
Event Server	Setup FTP/TCP/HTTP server for event
Event Schedule	Configure the schedule while event triggered

7.1.1 Network: Configure Network settings

Use this menu to configure the network to connect the device and the clients.

7.1.1.1 Network

This section provides the menu for connecting the device through Ethernet cable.

MAC address:

Displays the Ethernet MAC address of the device. Note that user can not modify it.

Obtain IP address automatically (DHCP):

DHCP: Stands for Dynamic Host Configuration Protocol.

Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically. If this device can not get an IP address within limited tries, the device will assign a default IP address, 192.168.1.30, by itself as the default IP address.

IP address, Subnet mask, and Gateway:

If you do not select **Obtain an IP address automatically**, then you need to enter these network parameters manually.

Obtain DNS from DHCP:

DNS: Stands for Domain Name System.

Enable this checked box when a DHCP server is installed on the network and provide DNS service.

Primary DNS and Secondary DNS:

If you do not select **Obtain DNS from DHCP**, then you need to enter these parameters manually.

HTTP Port:

The device supports two HTTP ports. The first one is default port 80 and this port is fixed. This port is very useful for Intranet usage. The second HTTP port is changeable. Users could assign the second port number of http protocol, and the WAN users should follow the port number to login. If the http port is not assigned as 80, users have to add the port number in back of IP address. For example: <http://192.168.1.30:8080>.

Therefore, the user can access the device by either <http://xx.xx.xx.xx/>, or <http://xx.xx.xx.xx:xxxx/> to access the device.

If multiple devices are installed on the LAN and also required to be accessed from the WAN, then the **HTTP Port** can be assigned as the virtual server port mapping to support multiple devices.

Click "OK" to save and enable the setting.

7.1.1.2 Wireless

If your device is a wireless model, you could assign the related parameters into wireless setting. Using a wired connection ensures greater secrecy while making these settings. These settings should always be made in the camera first and secondly in the wireless access point. This ensures that the device is always accessible when making changes. **Note** that this function is only available for the model with WLAN capability.

The screenshot shows the 'Wireless' configuration page. At the top, there are tabs for Network, Wireless, IPv6, HTTPS, DDNS, PPPoE, Streaming, UPnP, Bonjour, ONVIF, IP Filter, and IP Notification. The 'Wireless' tab is active.

Under 'WPS', there is a 'Push Button Configuration' section with a 'Start PBC' button. Below it is a 'Setting' section with an 'Easy Installation' button.

The 'Site Survey' section contains a table of nearby wireless networks:

MAC Address	SSID	Type	Channel	Encryption	Signal Strength
90:F6:52:B4:52:DC	MES	Infrastructure	11	WPA2PSK	89
CE:5D:4E:EC:B6:02	CHT+Wi-Fi%28HINet%29	Infrastructure	1	Off	42
54:04:A6:8C:EA:A4	ASUS	Infrastructure	1	WPA2PSK	57
00:1F:1F:00:00:07	EDIMAX	Infrastructure	11	WPA2PSK	26
CC:5D:4E:EC:B6:02	CHT+Wi-Fi+Auto	Infrastructure	1	WPA2PSK	37
DE:5D:4E:EC:B6:02	APTG+Wi-Fi	Infrastructure	1	Off	37

Below the table is a 'Reload' button. The 'MAC Address' field is set to 74:F0:6D:4E:8D:5A. The 'Interface Select' section has radio buttons for 'Wired (Ethernet) only', 'Auto - wired if cable connected, otherwise wireless' (selected), and 'Adhoc'. The 'Type' section has radio buttons for 'Adhoc' and 'Infrastructure' (selected). The 'SSID' field is set to CHT+Wi-Fi+Auto. The 'BSSID' field is set to CC:5D:4E:EC:B6:02. The 'Channel' dropdown is set to 'ETSI, Europe' and 'AUTO'. The 'Security Mode' section has radio buttons for 'None', 'WEP', and 'WPA_PSK/WPA2_PSK' (selected). At the bottom, there are 'OK' and 'Cancel' buttons.

WPS:

WPS (Wi-Fi Protected Setup) provides an easy procedure to make wireless connections between wireless station and wireless access point (wireless router) with the encryption of either WPA or WPA2. It is the simplest way to build connections between wireless network clients and router. Users do not need to select the encryption mode and type the long encryption passphrase to setup a wireless client every time. Users only need to press buttons on wireless client and router, and then WPS will establish a connection between client and router automatically.

There are two types of WPS: Push-Button Configuration (**PBC**) and PIN code. To use PBC, you have to click button here (Start PBC) to initiate WPS mode. You will also need to switch wireless router to WPS mode (by pressing WPS button).

Setting (Easy Installation):

Provides a 2-step procedure to configure wireless setting:

Step 1: Select SSID of wireless router or access point (AP).

Network	Wireless	IPv6	HTTPS	DDNS	PPPoE	Streaming	UPnP	Bonjour	ONVIF	IP Filter	IP Notification
---------	----------	------	-------	------	-------	-----------	------	---------	-------	-----------	-----------------

Step 1 : Please click the table to choose the SSID!

Site Survey

MAC Address	SSID	Type	Channel	Encryption	Signal Strength
DE:5D:4E:EC:B6:02	APTG+Wi-Fi	Infrastructure	1	Off	42
CE:5D:4E:EC:B6:02	CHT+Wi-Fi%28HiNet%29	Infrastructure	1	Off	37
CC:5D:4E:EC:B6:02	CHT+Wi-Fi+Auto	Infrastructure	1	WPA2PSK	42
58:8D:09:E2:D0:71	CECWIRELESS	Infrastructure	2	WPA2PSK	47
30:39:26:98:89:5D	WiFi+AP	Infrastructure	6	WPA2PSK	47
54:04:A6:8C:EA:A4	ASUS	Infrastructure	6	WPA2PSK	31
90:F6:52:B4:52:DC	MES	Infrastructure	11	WPA2PSK	94
00:1F:1F:00:00:07	EDIMAX	Infrastructure	11	WPA2PSK	26

Reload

SSID: WiFi+AP

Back Go Step 2

OK Cancel

Step 2: Key in security key of WEP or WPA. Then click **Submit** button to activate wireless setting.

Network	Wireless	IPv6	HTTPS	DDNS	PPPoE	Streaming	UPnP	Bonjour	ONVIF	IP Filter	IP Notification
---------	----------	------	-------	------	-------	-----------	------	---------	-------	-----------	-----------------

Step 2 : Please input the authentication information!

SSID: WiFi+AP

Security Mode: None WEP WPA_PSK/WPA2_PSK

WPA Mode: ABS COMP

WPA Key:

(ASCII: 8-63 Digits; HEX: 64 Digits)

Go Step 1 Submit

OK Cancel

In case, user wants to configure wireless settings manually, please follow the steps as below:

MAC address:

Displays the Ethernet MAC address of the WLAN card. Note that user cannot change it.

Site survey:

Click the "Refresh" button. It will refresh information window which list is the result of a network scan. Access points with a disabled SSID Broadcast will not appear unless the camera is associated with it. The following information is provided:

Interface Select:

"Wired (Ethernet) only" or "Auto – wired if cable connected, otherwise wireless":

Choose wired or wireless mode. However, note that wired is priority.

Type:

To select one of WLAN modes from Infrastructure or Ad-Hoc mode.

Security mode:

Shows which type of security the network uses. The device supports three security methods:

None, WEP, WPA_PSK/WPA2_PSK

SSID:

This is the name of the wireless network the device is configured for. The field accepts up to 32 alphanumeric characters. The name must be exactly the same as that used in the wireless access point, or the connection will not be established.

Leaving this field blank means the device will attempt to access the nearest open network.

Channel:

Chooses the wireless channel in use currently.

WEP settings:

● **Authentication:**

Select Open or Shared Key System Authentication, depending on the method used by your access point. Not all access points have this option, in which case they probably use Open System, which is sometimes known as SSID Authentication.

● **WEP Mode:**

The key types available depend on the access point being used. The following options are available:

- ASCII - In this method the string must be exactly 5 characters for 64-bit WEP and 13 characters for 128-bit WEP.
- HEX - In this method the string must be exactly 10 hexadecimal (0-9, A-F) characters for 64-bit WEP and 26 hexadecimal characters for 128-bit WEP.

● **Web Key 1~4:**

- Key value of WEP.

WPA settings:

● **WPA Key:**

Key value of WPA. The device uses a pre-shared key (PSK) for key management. The pre-shared key can be entered either as Manual hex, as 64 hexadecimal characters, or as a Passphrase, using 8 to 63 ASCII characters.

Obtain IP address automatically (DHCP):

Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically.

IP address, Subnet mask, and Gateway:

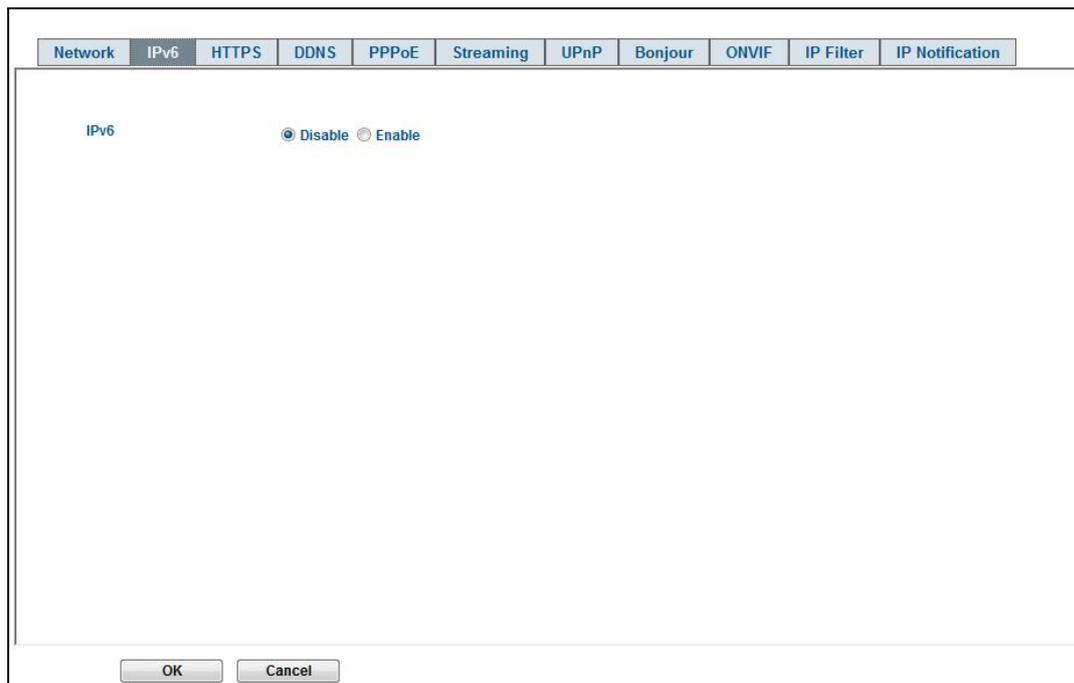
If you do not select **Obtain an IP address automatically**, then you need to enter these network parameters manually.

Select "OK" to save and enable the setting.

Note: To enable WLAN function, user must set these related parameters correctly at first. Then power off the device and remove Ethernet cable from device. Power on the device again and WLAN mode will be available accordingly.

7.1.1.3 IPv6

The IP communication protocol used for current Internet is having the problem of insufficient IP addresses. The one-for-all solution is the new-generation internet protocol, IPv6. IPv6 has 16-byte long address space, offering a huge number of addresses, and also provides better scalability, quality of service, mobility, and security to the network.



IPv6:

To enable or disable the IPv6 service here.

7.1.1.4 HTTPS

HTTPS: Stands for Hypertext Transfer Protocol Secure

HTTPS is a combination of the Hypertext Transfer Protocol with the SSL/TLS protocol to provide encrypted communication and secure identification of a network web server. HTTPS connections are often used for sensitive transactions in corporate information systems. The main idea of HTTPS is to create a secure channel over an insecure network. This ensures reasonable protection from eavesdroppers and man-in-the-middle attacks, provided that adequate cipher suites are used and that the server certificate is verified and trusted.

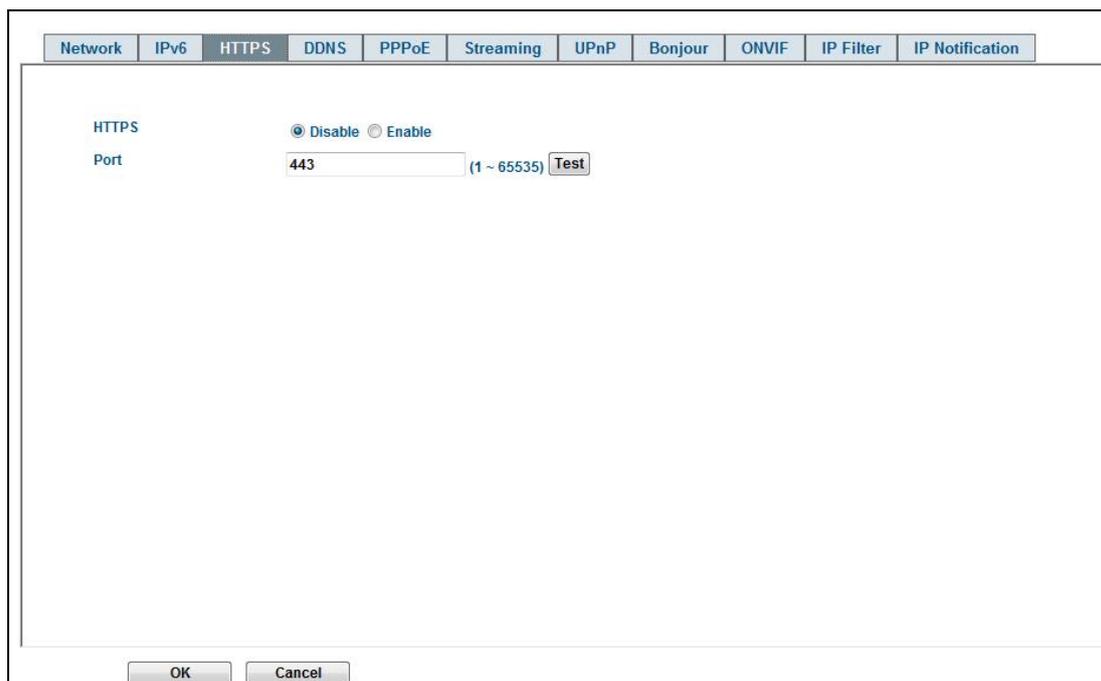
HTTPS:

To enable or disable the HTTPS service here. Note that the HTTPS function of this device is not only encrypted the web content but also audio/video data.

If the HTTPS is enabled, there is further option for "HTTP&HTTPS" or "HTTPS only". In case, the "HTTPS only" is enabled, all packets from the Camera will go through HTTPS only and HTTP service is no longer available.

Port:

Choose the HTTPS port. The default value is 443.



7.1.1.5 DDNS service

DDNS: Stands for Dynamic Domain Name Server

Your Internet Service Provider (ISP) provides you at least one IP address which you use to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it's likely to change periodically. Just how often it changes, depends 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 device over the Internet. One of the possible solutions to the dynamic IP address problem comes in the form of a dynamic DNS service.

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. 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.

If your device is connected to xDSL directly, you might need this feature. However, if your device is behind a NAT router, you will not need to enable this feature because your NAT router should take care of this job. As to xDSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP server, then the Dynamic Domain Name Server is necessary.

Network IPv6 HTTPS **DDNS** PPPoE Streaming UPnP Bonjour ONVIF IP Filter IP Notification

DDNS Disable Enable

Server Name

DDNS Host (1 ~ 30 Digits)

User Name (< 22 Digits)

Password (< 22 Digits)

Internet Status Disconnected

OK Cancel

DDNS:

To enable or disable the DDNS service here.

Server name:

Choose one of the built-in DDNS servers.

DDNSHost:

The domain name is applied of this device.

User name:

The user name is used to log into DDNS.

Password:

The password is used to log into DDNS.

7.1.1.6 PPPoE

PPPoE: Stands for Point to Point Protocol over Ethernet

A standard builds on Ethernet and Point-to-Point network protocol. It allows your device with xDSL or cable connects with broadband network directly, then your device can dial up and get a dynamic IP address. For more PPPoE and Internet configuration, please consult your dealer or ISP.

The device 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

- Connect to a LAN by DHCP or Fixed IP
- Access the device, enter **Setting** → **Network** → **PPPoE** as below

The screenshot shows a web interface for configuring PPPoE. At the top, there is a horizontal menu with tabs for 'Network', 'IPv6', 'HTTPS', 'DDNS', 'PPPoE', 'Streaming', 'UPnP', 'Bonjour', 'ONVIF', 'IP Filter', and 'IP Notification'. The 'PPPoE' tab is active. Below the menu, there are two radio buttons: 'Disable' (selected) and 'Enable'. Below the radio buttons are two text input fields: 'User Name' and 'Password', both with a character limit of '< 65 Digits'. Below these are five read-only fields: 'IP Address', 'Subnet Mask', 'Gateway', and 'Status', each with a blue background and '(readonly)' text. At the bottom of the form are 'OK' and 'Cancel' buttons.

PPPoE:

To enable or disable the PPPoE service here.

User name:

Type the user name for the PPPoE service which is provided by the ISP.

Password:

Type the password for the PPPoE service which is provided by the ISP.

IP address, Subnet mask, and Gateway (read only):

Shows the IP information got from PPPoE server site.

Status:

Shows the Status of PPPoE connection.

7.1.1.7 Streaming

RTSP is a streaming control protocol, and a starting point for negotiating transports such as RTP, multicast and Unicast, and for negotiating codecs. RTSP can be considered a "remote control" for controlling the media stream delivered by a media server. RTSP servers typically use RTP as the protocol for the actual transport of audio/video data.

RTSP Port:

Choose the RTSP port. The RTSP protocol allows a connecting client to start a video stream. Enter the RTSP port number to use. The default value is 554.

RTP Port:

Specify the range of transmission port number of video stream. The default range is 50000 to 50999. User can specify a number between 1024 and 65535.

Network | IPv6 | HTTPS | DDNS | PPPoE | **Streaming** | UPnP | Bonjour | ONVIF | IP Filter | IP Notification

RTSP Port: 554 (554 ~ 65535)

RTP Port: 50000 ~ 50999 (1024 ~ 65535)

7.1.1.8 UPnP

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 Network Camera. If your operating system is UPnP enabled, the device will automatically be detected and a new icon will be added to “My Network Places.” If you do not want to use the UPnP functionality, it can be disabled.

In addition, this device also provides UPnP IGD function for NAT traversal easily. Use NAT traversal when your device is located on an intranet (LAN) and you wish to make it available from the other (WAN) side of a NAT router. With NAT traversal properly configured, all HTTP traffic to an external HTTP port in the NAT router will be forwarded to the device.

Network | IPv6 | HTTPS | DDNS | PPPoE | Streaming | **UPnP** | Bonjour | ONVIF | IP Filter | IP Notification

UPnP: Disable Enable

Friendly Name: Megapixel IP Cam(192.168.1.30) (readonly)

UPnP NAT Traversal: Disable Enable

Port Range: 32768 ~ 65535 (1 ~ 65535)

External IP Address: (readonly)

UPnP:

To enable or disable the UPnP service here.

Friendly Name:

To show the friendly name of this device here.

UPnP NAT Traversal

When enabled, the device will attempt to configure port mapping in a NAT router on your network, using UPnP™. **Note** that UPnP™ must be enabled in the NAT router first.

Port Range:

The port range will open in NAT router.

External IP address:

Show the IP address and port for WAN access through Internet. If NAT traversal is configured successfully, user can use this IP address and port to access this device. The external IP address is not shown in case NAT traversal function is failed.

7.1.1.9 Bonjour

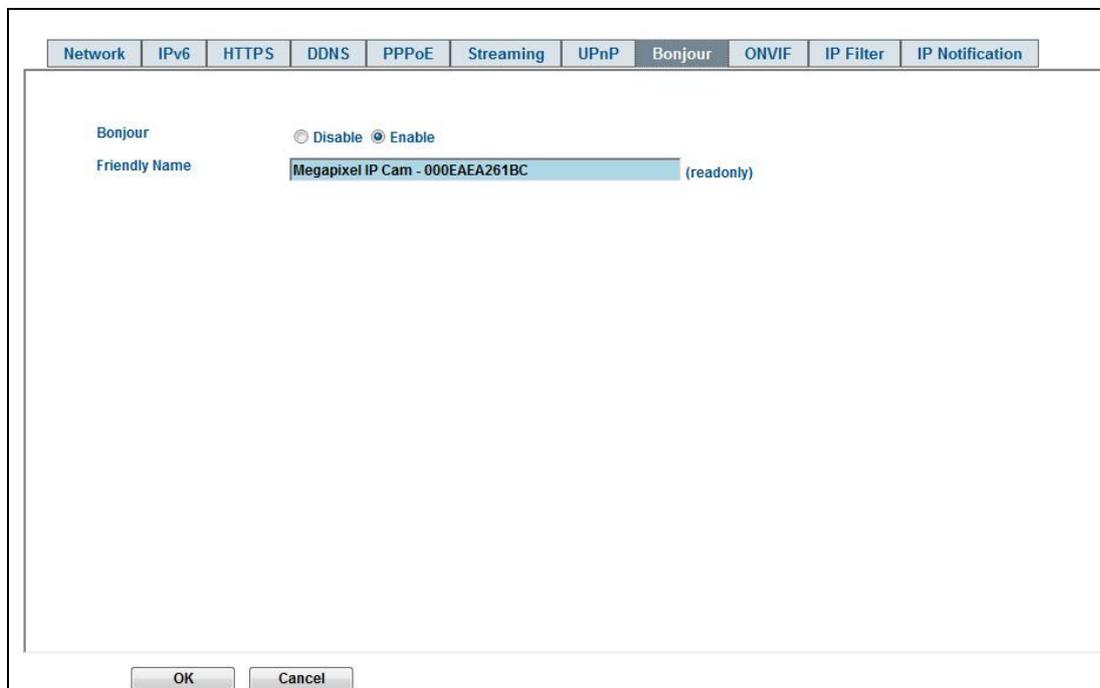
Bonjour, also known as zero-configuration networking, enables automatic discovery of computers, devices, and services on IP networks. Bonjour uses industry standard IP protocols to allow devices to automatically discover each other without the need to enter IP addresses or configure DNS servers. Specifically, Bonjour enables automatic IP address assignment without a DHCP server, name to address translation without a DNS server, and service discovery without a directory server. Bonjour is an open protocol which Apple has submitted to the IETF as part of the ongoing standards-creation process.

Bonjour:

To enable or disable the Bonjour service here.

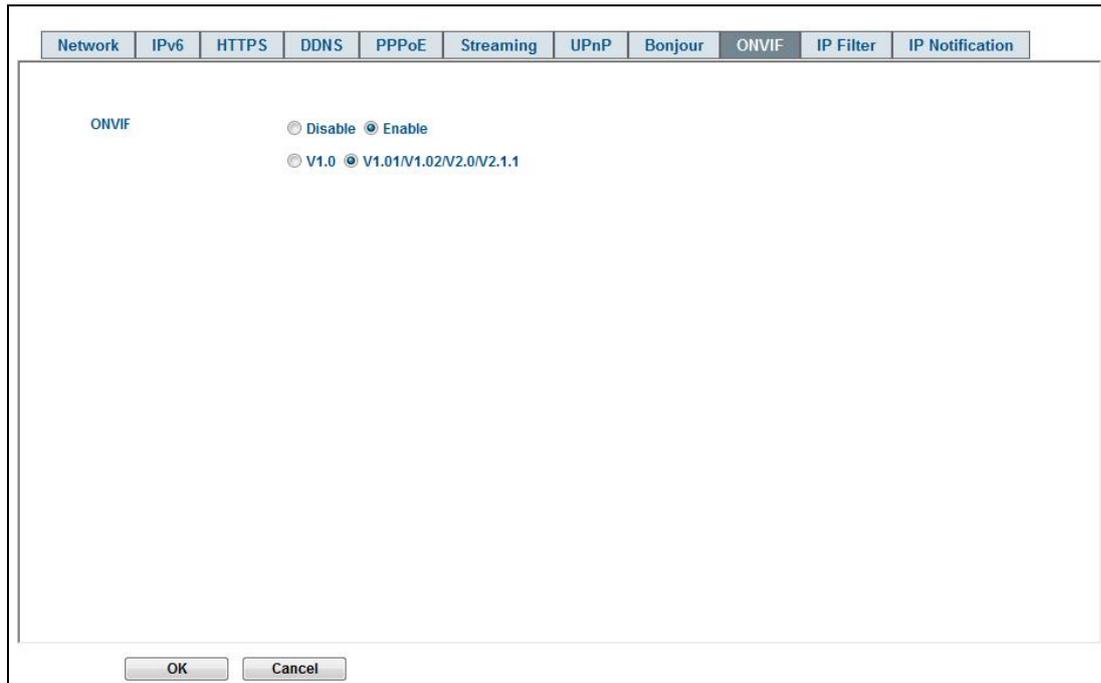
Friendly Name:

To show the friendly name of this device here.



7.1.1.10 ONVIF

ONVIF is a global and open industry forum with the goal to facilitate the development and use of a global open standard for the interface of physical IP-based security products. Or in other words, to create a standard for how IP products within video surveillance and other physical security areas can communicate with each other.



ONVIF:

To enable or disable the ONVIF interface here. And select the ONVIF version to match client's supported version.

7.1.1.11 IP Filter

You can enter different user's IP address which are allowing enter or denying by the device.

IP Filter:

To enable or disable the IP filter function here.

IP Filter Policy:

Choose the filter policy where is denying or allowing.



7.1.1.12 IP Notification

In case the IP address is changed, system is able to send out an email to alert someone if the function is enabled.

SMTP Notification (e-mail):

If enable this function, then the “Send to” and “Subject” fields need to be filled.

Send To:

Type the receiver’s e-mail address. This address is used for reply mail.

Subject:

Type the subject/title of the E-mail.

TCP Notification:

If enable this function, then the “TCP Server”, “TCP Port”, and “Message” fields need to be filled.

TCP Server:

Type the server name or the IP address of the TCP server.

TCP Port:

Set port number of TCP server.

Message:

The message will be sent to FTP server.

HTTP Notification:

If enable this function, then the fields below need to be filled.

URL:

Type the server name or the IP address of the HTTP server.

HTTP Login name:

Type the user name for the HTTP server.

HTTP Login Password:

Type the password for the HTTP server.

Proxy Address:

Type the server name or the IP address of the HTTP Proxy.

Proxy Port:

Set port number of Proxy.

Proxy Login name:

Type the user name for the HTTP Proxy.

Proxy Login Password:

Type the password for the HTTP Proxy.

Custom parameter:

User can set specific parameters to HTTP server.

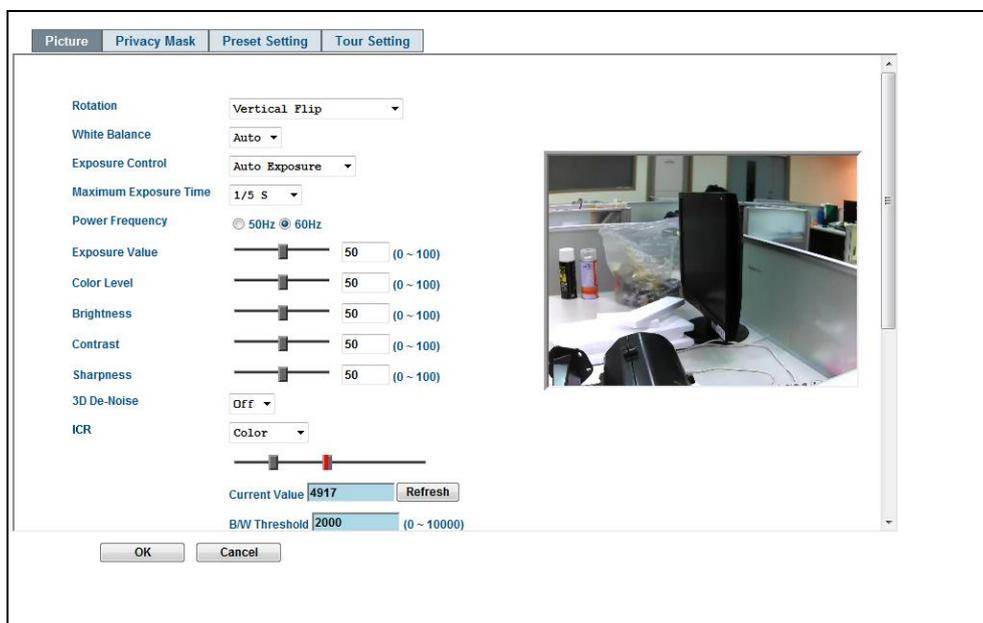
Message:

The message will be sent to HTTP server.

7.1.2 Camera: Adjust Camera parameters

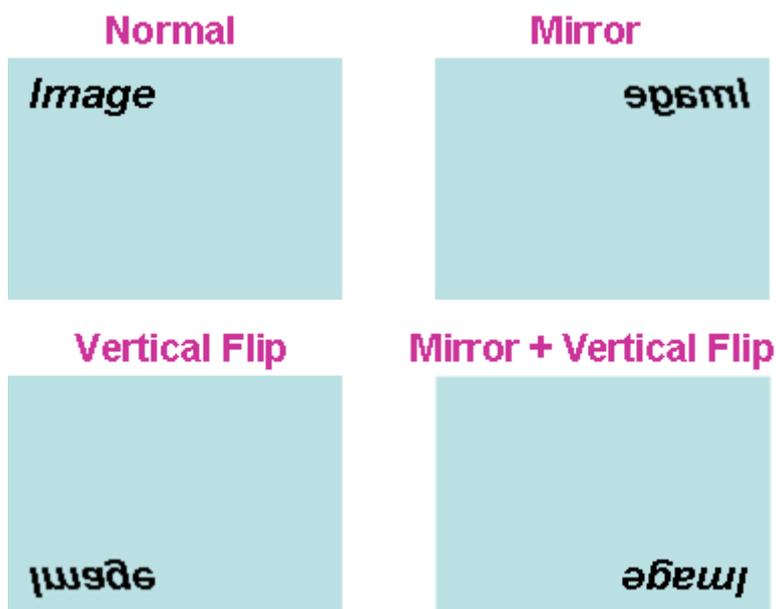
Use this menu to set the functions of the camera parameters of the device.

7.1.2.1 Picture



Rotation:

Turn the “Mirror” and “Vertical Flip” On or OFF. The image will be overturned as below.



White Balance:

Auto: will adjust the white balance automatically.
Hold: will hold the white balance.

Exposure Control:

Auto Exposure: will adjust the image sensor exposure automatically.
Hold Exposure: will hold the exposure setting.

Maximum Exposure Time:

Set the Maximum Exposure Time. However, the real exposure time may be shorter if good light condition.

Power Frequency:

Frequency of power line: 50 or 60Hz.

Exposure Value:

Exposure value is AE target value. This value is to adjust the integration, analog gain and digital gain to achieve the target brightness value (Exposure Value).

This value is dependent to "Auto Exposure" only.

Color Level:

Large value will be colorful.

Brightness:

Large value will brighten camera.

Contrast:

Large value will contrast camera heavily.

Sharpness:

Large value will sharpen camera.

3D De-Noise:

The 3D De-Noise can remove or lower unwanted noise and preserve fine details and edges as possible. This function is able to lower the bitrate a lot, especially in low light environment.

ICR:

Use built-in photo sensor or manual to control ICR.

In case user selects manual mode, there are 4 modes: Night (On), Day (Off), Auto or Schedule to control built-in IR LEDs. This function is very useful under low illumination environment even 0 Lux.

In case the Auto mode is selected, user needs to specify 3 parameters in advance:

In case the Auto mode is selected, user needs to specify 3 parameters in advance:

B/W Threshold (0~10000): this value set the threshold to turn on IR LED. It should be lower or equal to Day Mode Threshold.

Color Threshold (0~10000): this value set the threshold to turn off IR LED. It should be higher or equal to Night Mode Threshold.

Delay Time: The delay time between LED ON/OFF switching.

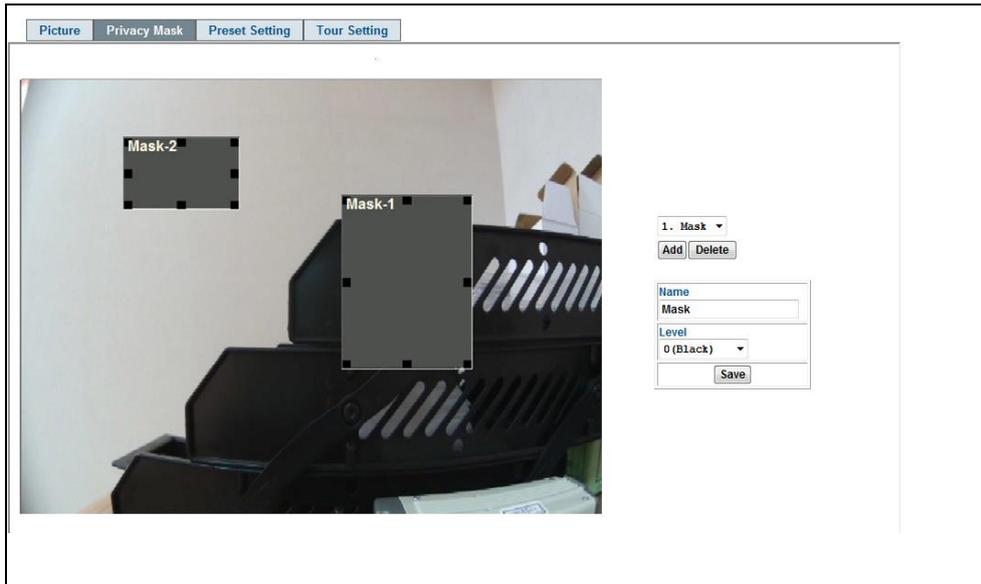
Note that Current Value is the current luminance from the captured video. It's a useful reference to set LED ON/OFF Threshold.

Default Settings:

Restore to factory image settings.

7.1.2.2 Privacy Mask

Use this page to specify privacy mask window 1 to window 8 and set the name and gray level for selected window.



Add and Delete:

To add or delete the privacy mask windows, user can specify up to 7 windows to mask the video captured by this device. By dragging mouse on the image, you can change the position and size of the selected window accordingly.

Name:

Name of the specified privacy window.

Level

To define the gray level of mask block. The smaller value will be darker.

7.1.2.3 Preset Setting

This page provides the edit tool to modify or delete the "Preset Setting" item by item.

7.1.2.4 Tour Setting

Up to 128 positions can be preset, and the camera can be programming to move to the preset position sequentially.

Tour Name:

The group name of the sequence of camera tour. The maximum number of camera tour is 16.

Running:

Enable or disable this camera tour.

Preset:

Set the sequence of the tour. Maximum 16 points can be assigned. The selected preset position is added in the Sequence list from 1 to 16.

Wait Time:

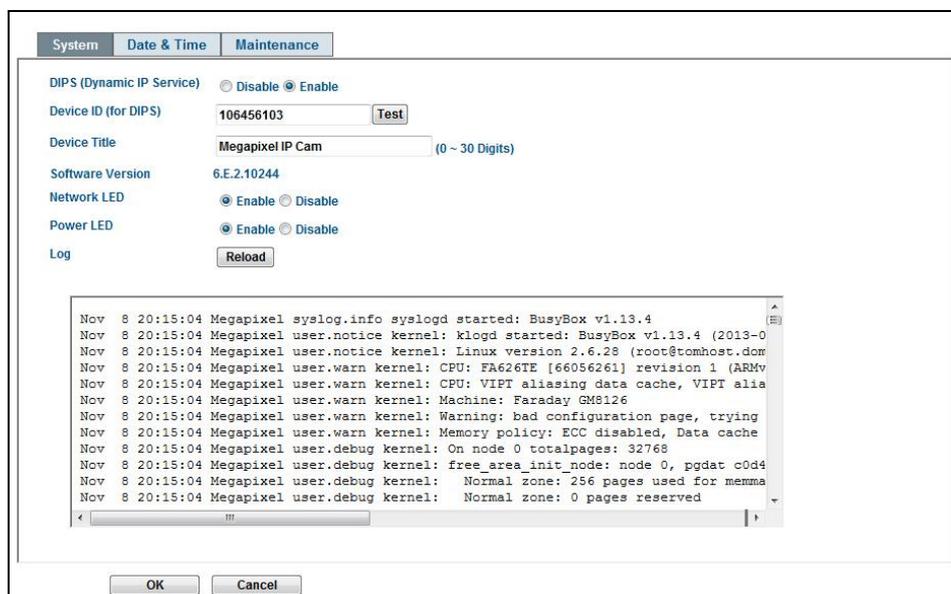
Type a period of time during which the camera is to stay at each preset point, between 0 to 36000 seconds.

To use the camera tour function, user must preset some camera positions first.

7.1.3 System: Configure and maintain system

Use this menu to perform the principal settings of the device.

7.1.3.1 System:



DIPS (Dynamic IP Service): -Function Discarded-

To enable or disable the DIPS® (Dynamic IP Service) function.

Device ID (for DIPS): -Function Discarded-

It's a unique number of each device for identification and this ID is used for DIPS.

It's feasible to locate your device from Internet by DDNS service. However, we provide another easier way to do the same job called Dynamic IP Service, DIPS®.

To use this service, just follow four steps below:

- (1) Enable DIPS function of the device
- (2) Check your Device ID from this page. This is a unique number for each device.
- (3) If your device is behind a NAT router, please configure your device properly. You could refer to section "Install the Camera behind a NAT Router" above. You only need to do this job one time.
- (4) Visiting company's website, you can find DIPS service page as below:



Enter your Device Number and press "OK" button.

Then, a new web page will pop up and link to your device accordingly.

You will see that DIPS is a much easier service than DDNS.

Device Title:

You can enter the name of this unit here. It's very useful to identify the specific device from multiple units. The information will be shown on IPWizard II once the device is found.

Software Version:

This information shows the software version of the device.

Network(LAN) LED:

To turn on or off Network(LAN) LED.

Power LED (Wireless LED):

To turn on or off the Power LED (wireless LED if WLAN model).

Log:

User can check the system log information of the device, including the *Main Info*, *Appended Info*, *Operator IP*, and so on ...

Reload:

Click this button; user can refresh the log information of the device.

7.1.3.2 Date & Time

You can setup the device or make it synchronized with PC or remote NTP server. Also, you may select your time zone in order to synchronize time locally.

Server Date & Time:

Displays the date and time of the device.

PC Time:

Displays the date and time of the connected PC.

Adjust:

- **Synchronize with PC:**
Click this option to enable time synchronization with PC time.
- **Manual setting:**
Click this option to set time and date manually.
- **Synchronize with NTP:**
Click this option if you want to synchronize the device's date and time with those of time server called NTP server (Network Time Protocol).

NTP Server: Type the host name or IP address or domain name of the NTP server.

NTP sync. Interval: Select an interval between 1 and 24 hours at which you want to adjust the device's time referring to NTP server

Time zone:

Set the time difference from Greenwich Mean Time in the area where the device is installed.

Daylight Saving:

Disable or enable the daylight saving adjustment.

7.1.3.3 Maintenance

Hard Factory Default (Include the network setting):

Recall the device hard factory default settings. Note that click this button will reset all device's parameters to the factory settings (including the IP address).

Factory Default (Except the network setting):

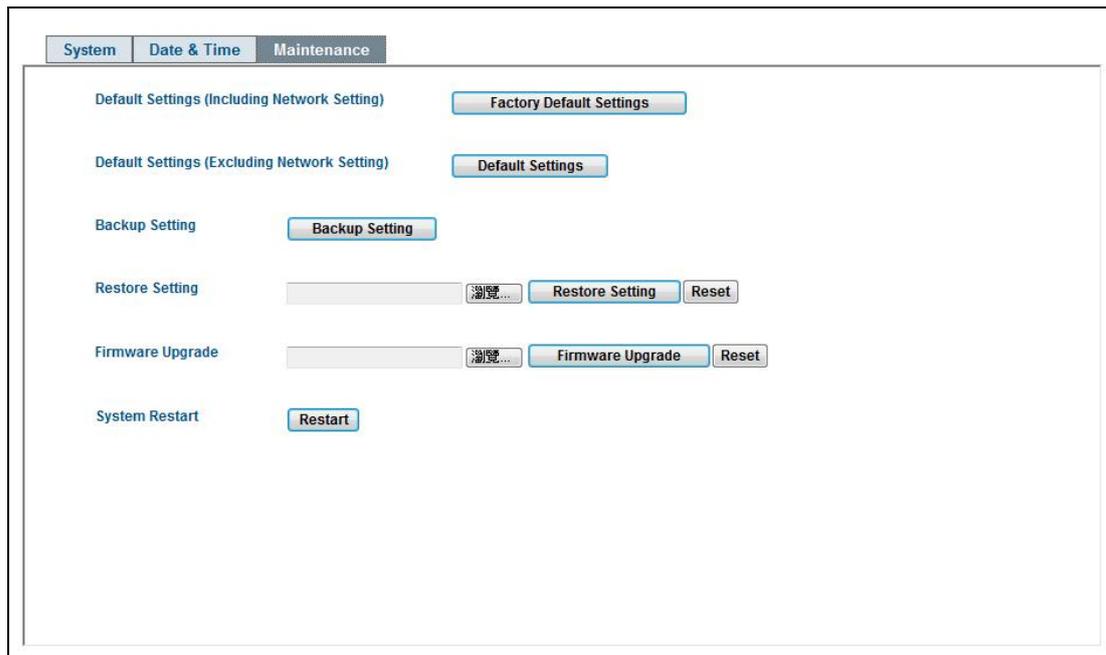
The unit is restarted and most current settings are reset to factory default values. This action will not reset the network setting.

Backup Setting:

To take a backup of all of the parameters, click this button. If necessary, it will then be possible to return to the previous settings, if settings are changed and there is unexpected behavior.

Restore Setting:

Click the **"Browse"** button to locate the saved backup file and then click the **"Restore Setting"** button. The settings will be restored to the previous configuration.



Firmware Upgrade:

The device supports new firmware upgrade (the software that controls the operation in the device). Please contact your dealer for the latest version if necessary.

Download the latest firmware file from our website or your dealer. Unzip this firmware file to binary file and store it into your PC. Then follow the steps as below carefully:

1. Close all other application programs which are not necessary for firmware update.
- 2. Make sure that only you access this device while firmware updating.**
3. Disable all event trigger and/or schedule trigger functions first.
4. In this web page, click "**Browse**" button. Select the Firmware binary file.
5. Once the firmware file was selected, click "**Firmware Upgrade**" button.
6. The upgrade progress information will be displayed. Once the uploading process completed, the device will reboot the system automatically.
7. Please wait for timer countdown, and then you can use IPWizard II to search the device again.

Warning!!! The download firmware procedure cannot be interrupted. If the power and/or network connection are broken during the download procedure, it WILL cause serious damage to the device.

Strongly suggest that DO NOT upgrade firmware via Wireless LAN due to high error rate possibly and don't allow any other clients to access this unit during updating procedure.

Be aware that you SHALL NOT turn off the power during updating the firmware and wait for finish message.

Furthermore, the firmware upgrade procedure is always risky and do not try to upgrade new firmware if it's not necessary.

System Restart:

The device is restarted without changing any of the network settings. It means the IP address of the device will not change after firmware upgrade.

7.1.4 Video: Configure profile

This device provides 2 modes of video profile. The first one is 1.3 Mega mode which supports video resolution up to 1.3 Mega-pixel. Maximum frame rate of this mode is up to 30fps. The second one is 720p mode which supports video resolution up to 1280x720 but frame rate can be up to 30fps. User only can select either 1.3 Mega or 720p mode to operate the camera. Switching 1.3 Mega and 720p mode, the device will take time to re-configure system.

7.1.4.1 Common

Video Profile:

User can only choose either 720p or 1.3 Mega modes. 720p mode can serve streams up to 1280x720 resolution maximum. On the other hand, 1.3 Mega mode, it can streams up to 1280 x 1024 resolution (depend on model) maximum.

Text Overlay Setting:

There are some important information can be embedded into image, including date, time, and/or text. User also can change the font color, background color, or Transparency.

7.1.4.2 Video Profile

Common		Video Profile		ROI					
Name	Video Type	Resolution	Rate Control	Quality	Bitrate	Max Frame Rate	GOP Control	ROI	Multicast
Profile1	h264	1280x1024	EVBR	90	-	30	30	no	no
Profile2	mjpeg	1280x1024	VBR	90	-	6	1	no	no
Profile3	h264	640x480	EVBR	90	-	30	30	no	no
Profile4	mjpeg	640x480	VBR	90	-	6	1	no	no
Profile5	h264	320x240	EVBR	90	-	30	30	no	no
Profile6	mjpeg	320x240	VBR	90	-	30	1	no	no
Profile7	h264	160x120	EVBR	90	-	30	30	no	no
Profile8	mjpeg	160x120	VBR	90	-	30	1	no	no

Name	Profile1
Video Type	h264
Resolution	1280x1024
ROI	<input type="radio"/> Yes <input checked="" type="radio"/> No
Rate Control	EVBR Quality 90 Max Bitrate 4000 K bps 384 ~ 4000
Max Frame Rate	30
GOP Control	30
Multicast	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Multicast Video	IP Address 239.198.97.181 Port 0 (0 means auto, 1024 ~ 65534)
Multicast Audio	IP Address 239.198.97.181 Port 0 (0 means auto, 1024 ~ 65534)
Time to live	1

Name:

To assign a name to the selected profile.

Video Type:

Video codec of the selected profile.

Resolution:

Show the resolution of the selected profile.

ROI:

Assign the selected profile as a ROI stream or not. (Only available for the profiles with max resolution)

Rate Control:

Defines the rate control method of this profile. There are four options: Constant Bit Rate (CBR), Variable Bit Rate (VBR), Enhanced Constant Bit Rate (ECBR), and Enhanced Variable Bit Rate (EVBR).

For CBR, the video bit rate is between low to high bandwidth based on different resolutions. User can set the desired bit rate to match the limitation of bandwidth.

For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value can reach the better quality but of course will consume higher bandwidth.

For ECBR, the video bitrate is based on normal CBR mode. However, the target bitrate can be increased to max target bitrate while lots of motion in video. The max target bitrate will keep a pre-defined time period and then back to normal CBR bitrate.

For EVBR, the video bitrate is based on normal VBR mode. However, the bitrate can be limited to the max bitrate while lots of motion in video.

Max Frame Rate:

Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second as possible. User need to set reasonable max frame rate versus video quality under the limited bandwidth.

GOP Control:

Defines the Intra/Inter-frame (I/P) ratio of this profile. For example, set the GOP to 30, then the video stream will have one Intra-frame every 30 frames.

Multicast:

Enable or disable the multicast function.

Multicast Video:

IP address and port for multicast video streaming of the selected profile.

Multicast Audio:

IP address and port for multicast audio streaming of the selected profile.

Time to live:

Time to live (TTL) is a mechanism that limits the lifespan of data in a computer or network. Once the prescribed event count or time span has elapsed, data is discarded. TTL prevents a data packet from circulating indefinitely.

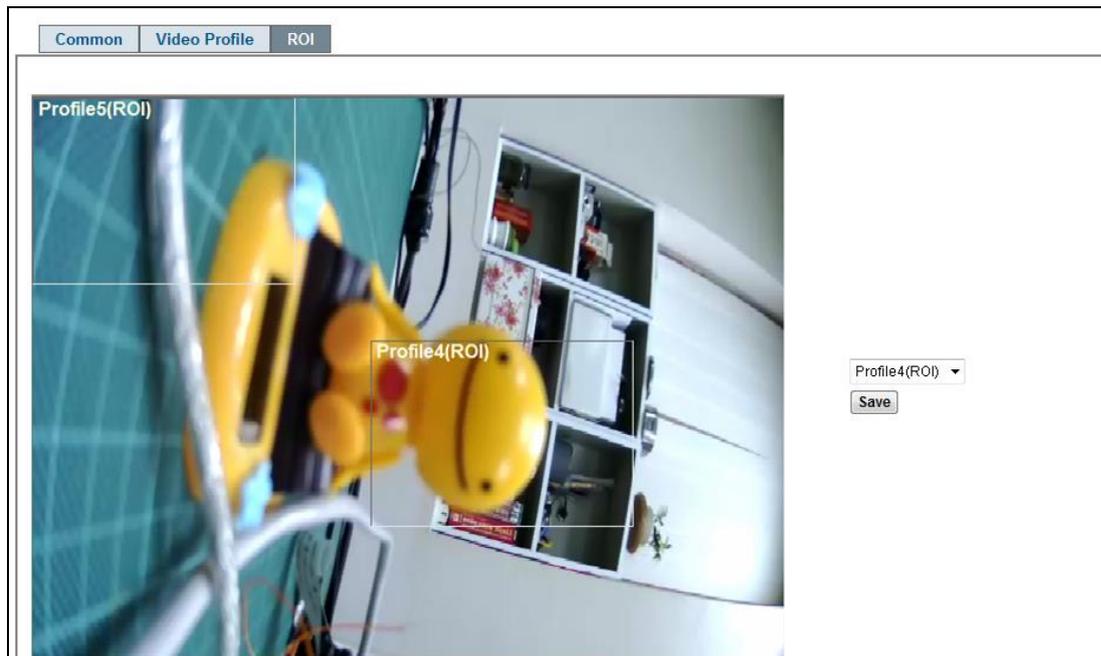
Always Enable Multicast:

Multicast streaming is always enabled or by request.

Warning!!! To enable the multicast streaming, you shall make sure your Intranet does support multicast function. Otherwise, your Intranet may occur network storm seriously.

7.1.4.3 ROI

ROI means Region of Interest. This feature is available in 1.3M resolution only. Use this page to specify location of ROI windows.



7.1.5 Audio: Audio parameters

Setting

Audio Disable Enable

Audio Type g726

Audio Mode Simplex Full duplex

Input Gain 80

Output Gain 80

Audio:

To enable or disable audio function

Audio Type:

To select audio codec

Mute While PT:

Mute the audio while pan and/or tilt motion

Audio Mode:

To select Simplex or Full duplex (2-way audio) mode

Input Gain:

To adjust gain of input audio

Output Gain:

To adjust gain of output audio

7.1.6 User: Manage user name, password and login privilege

Use this menu to add, update, or remove the usernames and passwords of the Administrator and viewer.

The screenshot shows a web interface for user management. At the top left, there is a 'Setting' tab. The main content area is divided into two sections. On the left is a table titled 'User List' with two columns: 'User Name' and 'Access Right'. The table contains one entry: 'admin' with 'administrator' as the access right. On the right is a form for adding or modifying a user. The form has the following fields: 'User Name' (text input, 1-20 Digits), 'Password' (text input, 0-20 Digits), 'Verify Password' (text input, 0-20 Digits), and 'Access Right' (radio buttons for 'Administrator' and 'Viewer', with 'Viewer' selected). At the bottom of the form are three buttons: 'Add', 'Modify', and 'Delete'.

Access Right:

Administrator can access every function in this device. However, Viewers only can view the video and access limited function.

PTZ Control:

Authorize this user to control PTZ function or not.

Add, update, and remove of Users account:

Manage the user's account of viewer user.

7.1.7 E-Mail: Setup E-Mail configuration

User may setup SMTP mail parameters for further operation of Event Schedule. That's, if users want to send the alarm message out, it will need to configure parameters here first and also add at least one event schedule to enable event triggering.

The screenshot shows a 'Setting' page for SMTP configuration. It includes the following fields and options:

- SMTP Server:** Text input field with a character limit of '< 129 Digits' and a 'Test' button.
- SMTP Port:** Text input field containing '25' and a character limit of '(1 ~ 65535)'. The '25' is highlighted in blue.
- SSL:** Radio button options for 'Disable' (selected) and 'Enable'.
- SMTP Authentication:** Radio button options for 'Disable' (selected) and 'Enable'.
- Authentication User Name:** Text input field with a character limit of '< 65 Digits'.
- Authentication Password:** Text input field with a character limit of '< 22 Digits'.
- E-mail From:** Text input field with a character limit of '< 129 Digits'.
- E-mail To:** Text input field with a character limit of '< 129 Digits'.
- E-mail Subject:** Text input field with a character limit of '< 65 Digits'.

SMTP Server:

Type the SMTP server name or the IP address of the SMTP server.

Test:

Send a test mail to mail server to check this account is available or not.

SMTP Port:

Set port number of SMTP service.

SSL:

Enable SSL function or not.

SMTP Authentication:

Select the authentication required when you send an e-mail.

- **Disable:** if no authentication is required when an e-mail is sent.
- **Enable:** if authentication is required when an e-mail is sent.

Authentication User name:

Type the user name for the SMTP server if **Authentication** is **Enable**.

Authentication Password:

Type the password for the SMTP server if **Authentication** is **Enable**.

E-mail From:

Type the sender's E-mail address. This address is used for reply e-mails.

E-mail To:

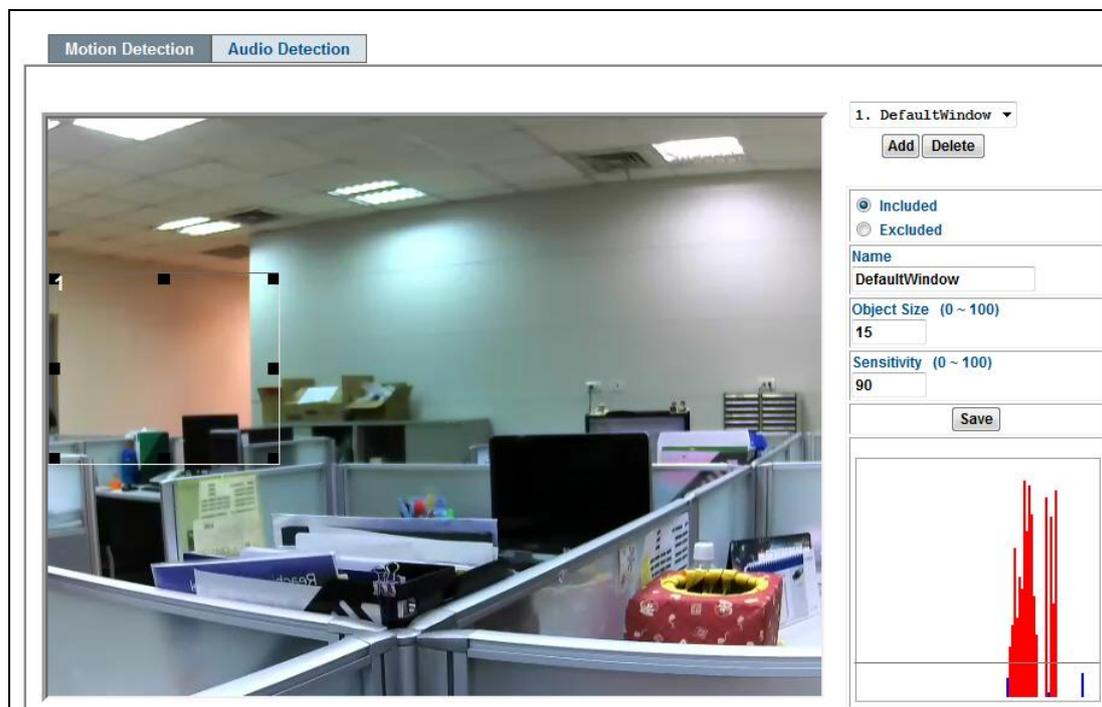
Type the receiver's e-mail address.

E-mail Subject:

Type the subject/title of the e-mail.

7.1.8 Motion detection: Setup motion detection

Use this menu to specify motion detection window 1 to window 10 and set the conditions for detection while observing a captured image.



Add and Del:

To add or delete the motion windows. User can specify up to 10 Included and/or Excluded windows to monitor the video captured by this device. By dragging mouse on the image, you can change the position and size of the selected motion window accordingly.

Included or Excluded Window:

These windows can be specified as Included or Excluded type.

- **Included** windows target specific areas within the whole video image
- **Excluded** windows define areas within an Include window that should be ignored (areas outside Include windows are automatically ignored)

Name:

Name of the specified motion window.

Object Size:

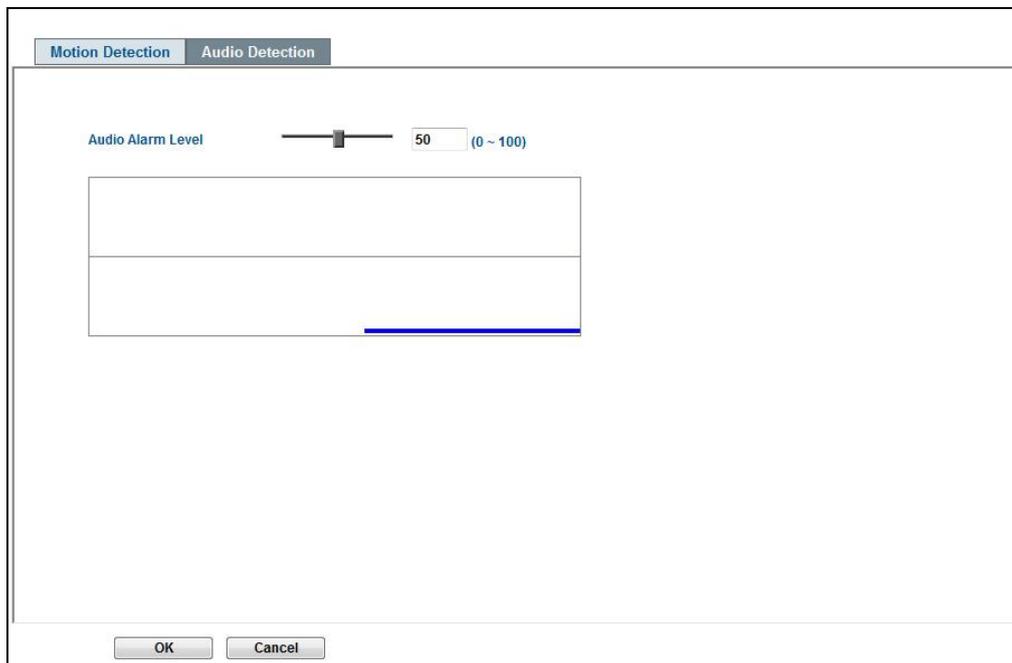
Defines the object size of motion detection. The higher object size will only larger objects trigger motion detection. The lower object size will even small objects trigger motion detection too. Generally speaking, the smaller size will be easier to trigger event.

Sensitivity

Defines the sensitivity value of motion detection. The higher value will be more sensitivity.

7.1.9 Audio detection: Setup audio detection

Use this menu to specify audio alarm level. Event will be triggered if detected audio volume exceeds the alarm level.



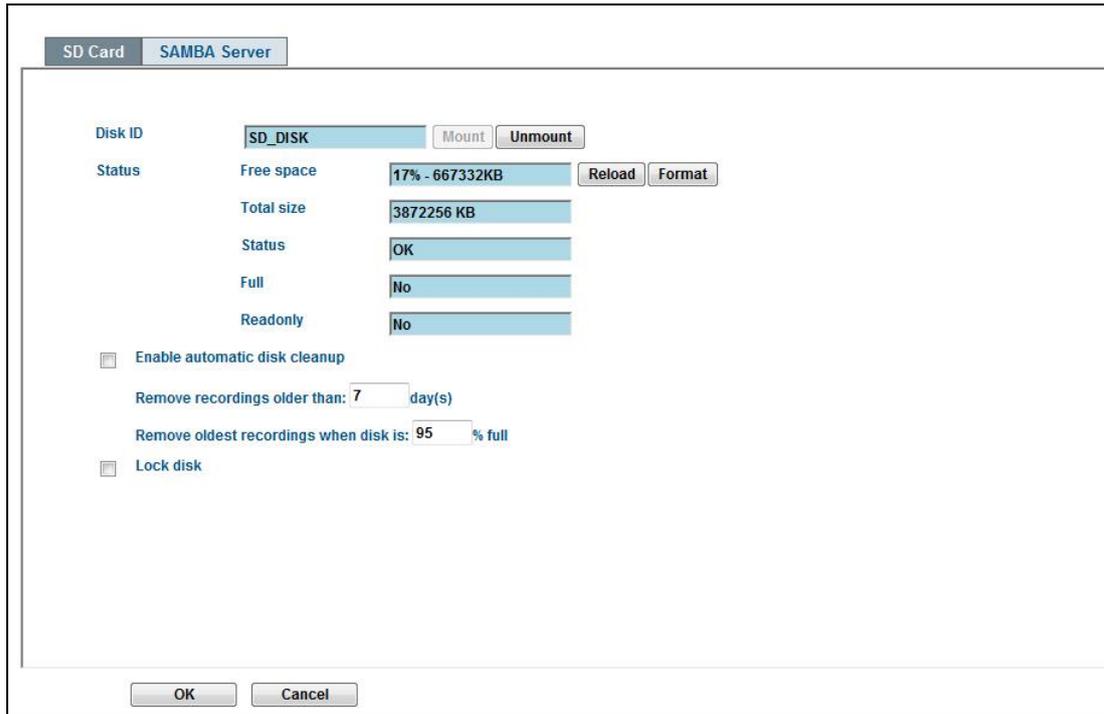
Audio Alarm Level:

Move the slide to specify the audio alarm level. The level bar will change accordingly in the picture below and current detected volume is displayed in blue.

7.1.10 Storage: Status and configuration of SD card

7.1.10.1 SD Card

This page shows the status of attached SD card. You may setup related parameters to manage the attached SD card also.



Enable automatic disk cleanup:

Delete old recorded files while the conditions are reached as below.

Remove recordings order than:

Delete old files by days.

Remove oldest recordings when disk is:

Delete old files by left capacity.

7.1.10.2 SAMBA Server

This page shows the status of SAMBA server. You may setup related parameters to manage the remote SAMBA server.

Host	<input type="text"/>	(1 ~ 63 Digits)
Share	<input type="text"/>	(1 ~ 63 Digits)
User Name	<input type="text"/>	(< 63 Digits)
Password	<input type="text"/>	(< 63 Digits)
Status	Not Connect	
Total size	0 KB	
Free space	0% - 0 KB	
SAMBA Server	<input type="button" value="Mount"/>	

OK Cancel

Host:

Type the SAMBA server domain name or the IP address of the SMTP server.

Share:

Type the share folder of remote SAMBA server which the camera will upload files to this space.

User name:

Type the user name for the remote SAMBA server.

Password:

Type the password for the remote SAMBA server.

7.1.11 Continuous Recording:

The camera can continuously record video stream into files and save them to attached SD card or remote SAMBA server.

Note that there are various factors affecting the recording results, such as the camera's system loading, network condition, SD card performance, multiple client accessing, and so on. No guarantee will be given to "seamless recording" in the recorded video files.

Continuous Recording

Continuous Recording Disable Enable

Record File Type Profile1 h264 / 1280x1024

Disk SD Card SAMBA Server

Path Megapixel_IP_Cam-000EA (For example: Folder1/Folder2/Folder3) (1 ~ 63 Digits)

Restart (Restarting will delete the current recording.)

Oldest recordings will be removed if the disk is 90% full and free space is smaller than 1GB.

OK Cancel

Continuous Recording:

Enable or disable this function.

Record File Type:

Choose a video profile to record.

DISK:

Save recorded files to SD card or remote SAMBA server.

Path:

Define the folder path for the recorded files.

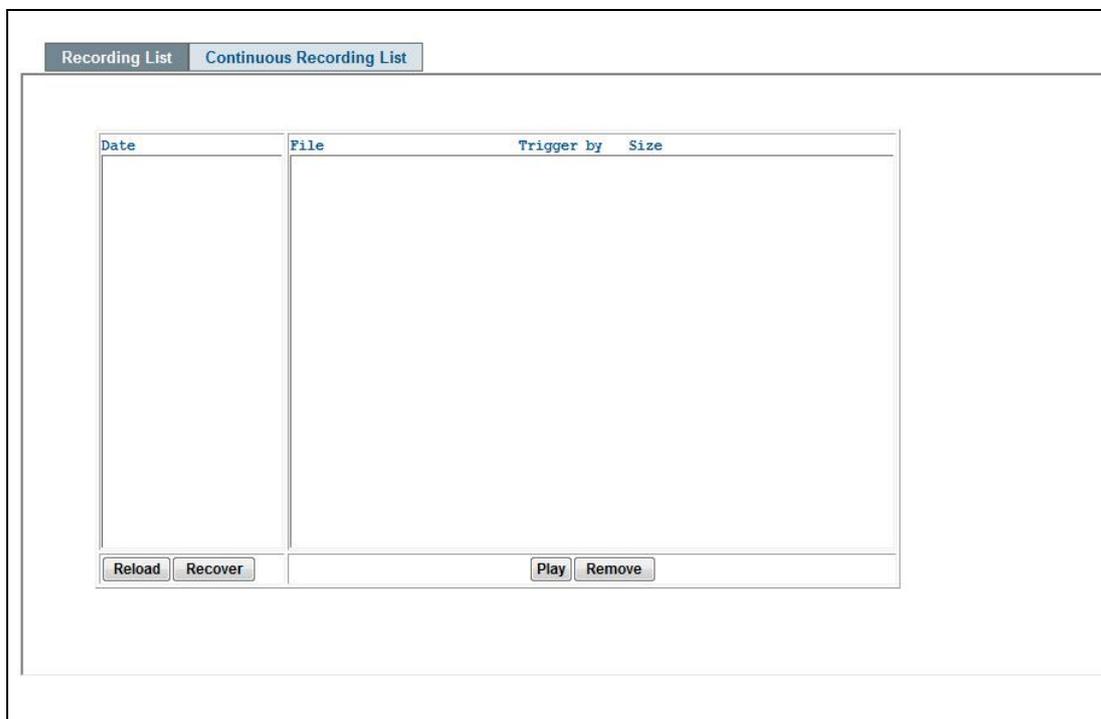
Restart:

Be careful, click this button will delete all continuous files recorded in SD card or remote SAMBA server.

7.1.12 Recording List: Files list inside the SD Card

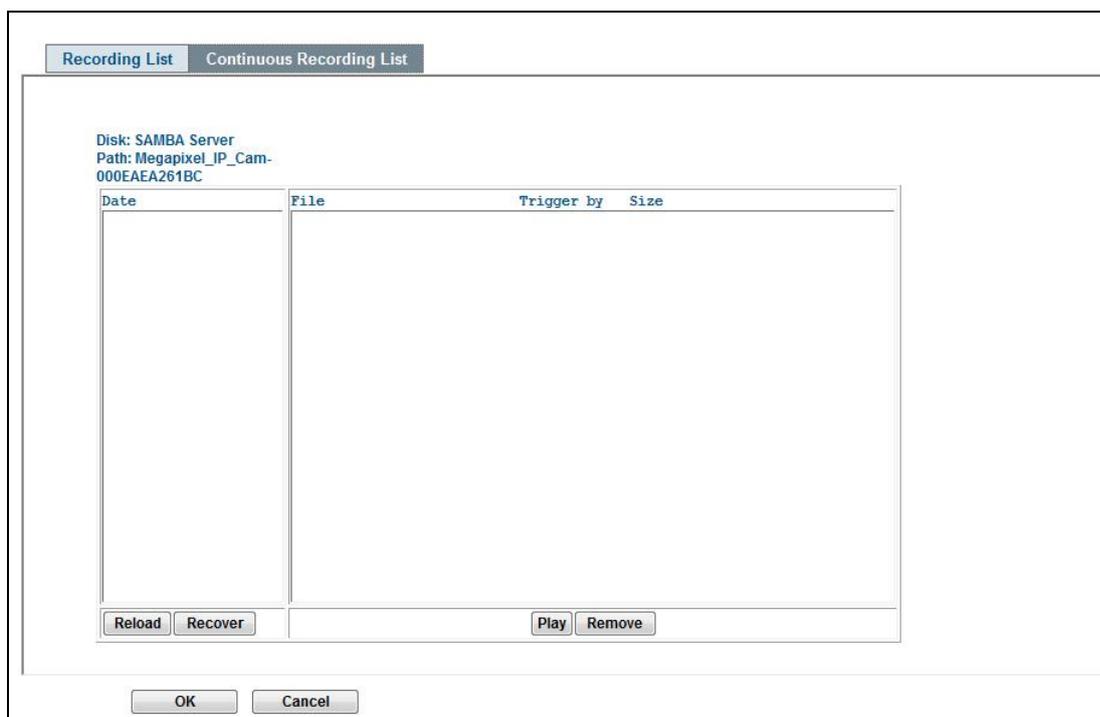
7.1.12.1 Recording List

This page only shows the event recording files which stored in SD card. User may play or delete the selected file.



7.1.12.2 Continuous Recording List

This page only shows the continuous recording files which stored in SD card or remote SAMBA server. User may play or delete the selected file.



7.1.13 Event Server: Setup FTP/TCP/HTTP/SAMBA server configuration

7.1.13.1 FTP Server

You may setup FTP parameters for further operation of Event Schedule. That's, if users want to send the alarm message to an FTP server, it will need to configure parameters here and also add at least one event schedule to enable event triggering as SMTP.

Name	FTP Server	FTP Port	FTP Path

Name	<input type="text"/>	(< 22 Digits)
FTP Server	<input type="text"/>	(< 65 Digits) <input type="button" value="Test"/>
FTP Login Name	<input type="text"/>	(< 22 Digits)
FTP Login Password	<input type="text"/>	(< 22 Digits)
FTP Port	21	(1 ~ 65535)
FTP Path	<input type="text"/>	(< 65 Digits)
FTP Passive Mode	<input checked="" type="radio"/> Disable <input type="radio"/> Enable	

Name:

User can specify multiple FTP paths as wish. Therefore, user needs to specify a name for each FTP setting.

FTP Server:

Type the server name or the IP address of the FTP server.

Test:

Check the FTP server whether this account is available or not.

FTP Login name:

Type the user name for the FTP server.

FTP Login Password:

Type the password for the FTP server.

FTP Port:

Set port number of FTP service.

FTP Path:

Set working directory path of FTP server.

FTP Passive Mode:

Select passive or active mode connecting to FTP server.

7.1.13.2 TCP Server

In addition to send video file to FTP server, the device also can send event message to specified TCP server.

Name	TCP Server	TCP Port
------	------------	----------

Name (< 22 Digits)

TCP Server (< 65 Digits)

TCP Port (1 ~ 65535)

Name:

User can specify multiple TCP servers as wish. Therefore, user needs to specify a name for each TCP server setting.

TCP Server:

Type the server name or the IP address of the TCP server.

TCP Port:

Set port number of TCP server.

7.1.13.3 HTTP Server

The device also can send event message to specified HTTP server.

Name	Proxy Address
------	---------------

Name (< 22 Digits)

URL (< 129 Digits)

HTTP Login Name (< 22 Digits)

HTTP Login Password (< 22 Digits)

Proxy Address (< 129 Digits)

Proxy Login Name (< 22 Digits)

Proxy Login Password (< 22 Digits)

Proxy Port (1 ~ 65535)

Name:

User can specify multiple HTTP servers as wish. Therefore, user needs to specify a name for each HTTP server setting.

URL:

Type the server name or the IP address of the HTTP server.

Test:

Check the HTTP server whether it is available or not.

HTTP Login name:

Type the user name for the HTTP server.

HTTP Login Password:

Type the password for the HTTP server.

Proxy Address:

Type the server name or the IP address of the HTTP Proxy.

Proxy Login name:

Type the user name for the HTTP Proxy.

Proxy Login Password:

Type the password for the HTTP Proxy.

Proxy Port:

Set port number of Proxy.

7.1.13.4 SAMBA Server

The device also can send video stream to specified SAMBA server.

Name	SAMBA Server	SAMBA Path
------	--------------	------------

Name (< 22 Digits)

SAMBA Server (< 65 Digits)

SAMBA Login Name (< 22 Digits)

SAMBA Login Password (< 22 Digits)

SAMBA Path (< 65 Digits)

Name:

User can specify multiple HTTP servers as wish. Therefore, user needs to specify a name for each HTTP server setting.

SAMBA Server:

Type the server name or the IP address of the SAMBA server.

Test:

Check the SAMBA server whether this account is available or not.

SAMBA Login name:

Type the user name for the SAMBA server.

SAMBA Login Password:

Type the password for the SAMBA server.

SAMBA Path:

Set working directory path of SAMBA server.

7.1.14 Event Schedule: Configure the event schedule

7.1.14.1 Setting

This menu is used to specify the schedule of Event or Schedule Trigger and activate the some actions provided by this device. Where the Schedule Trigger will be activated by user-define interval without event happened.

Name:

Name of the Event or Schedule.

Enable:

Enable or disable this Event or Schedule.

Type:

Event trigger or Schedule trigger.

Enable Time:

Define the feasible time slot.

Trigger by:

Select the triggered sources.

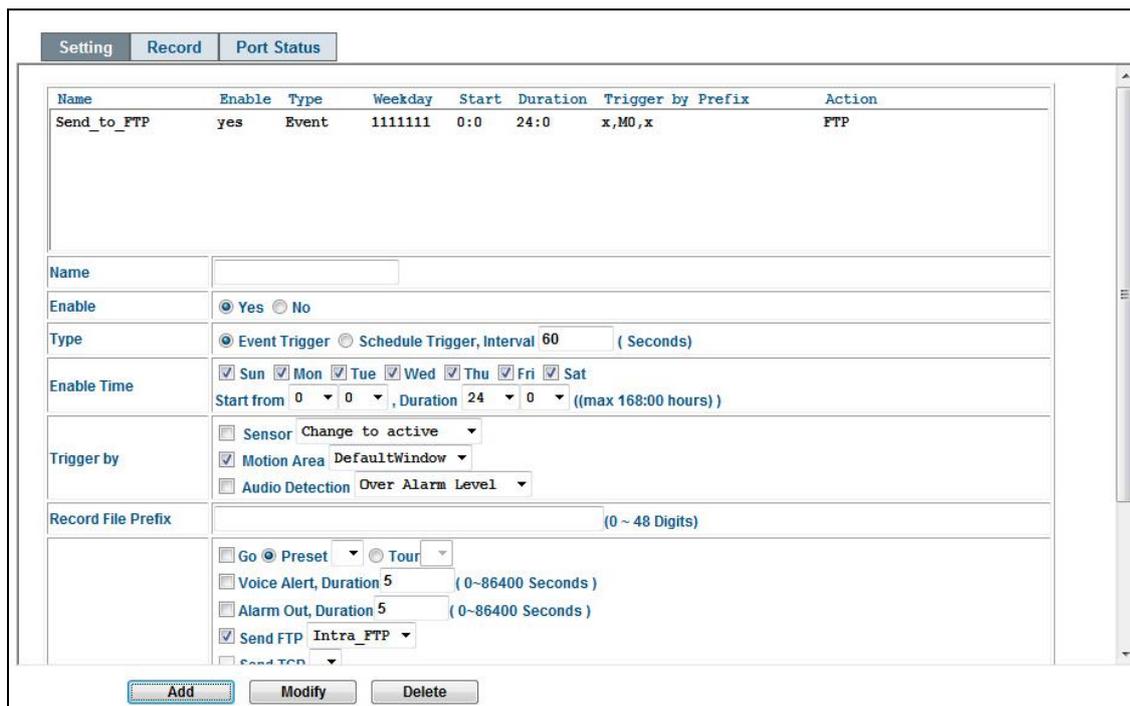
Action:

Define the actions once event triggered.

Example 1:

Send file to FTP server by motion triggered always:

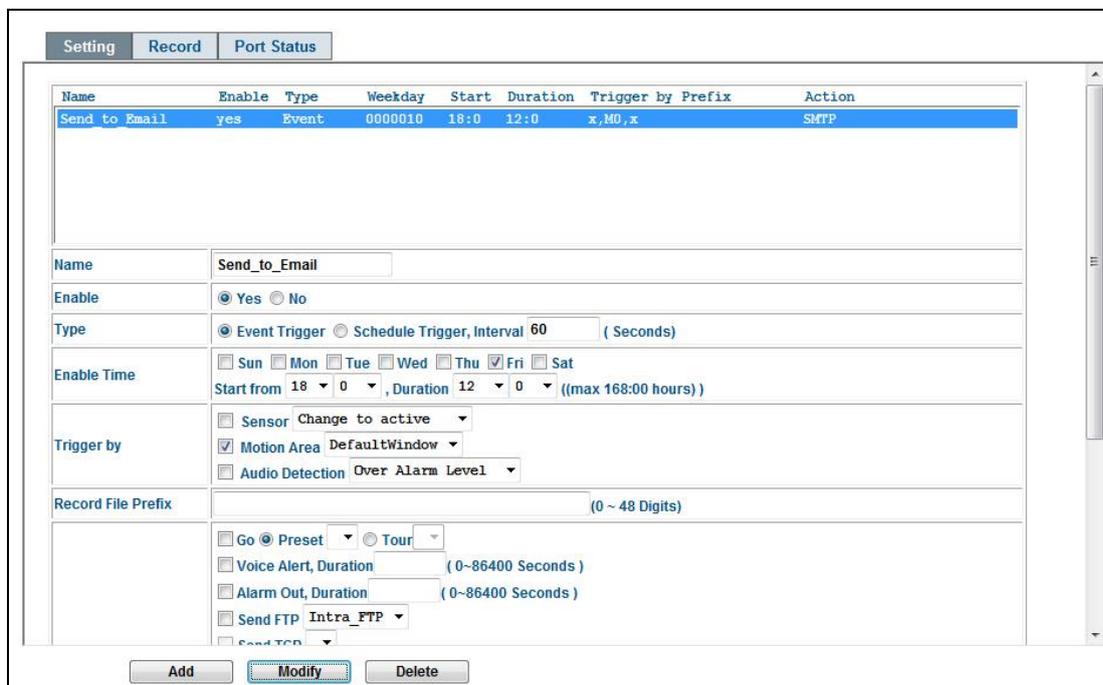
1. Select event trigger
2. Enable time: start from 00:00 to 24:00 every day
3. Trigger by: Motion Area (Added in Motion Detection page)
4. Action : Send FTP (Add in Event Server -> FTP Server page)



Example 2:

Send file to E-Mail server by motion triggered from Friday 18:00 to Saturday 06:00

1. Select event trigger.
2. Enable time: start from Friday 18:00 and keep work in 12 hours, so it will stop on Saturday 06:00.
3. Trigger by : Motion Area (Added in Motion Detection page)
4. Action : Send e-mail (Add in E-Mail page)
 - i \ To email address: You need to input the receiver email address.
 - ii \ Subject: You could specify the email subject.
 - iii \ Message: You could specify the email content.



Example 3:

Enable Voice Alert every 10-minute during 18:00 to 24:00 from Monday to Friday.

1. Type: Select schedule trigger and interval is 10-minute.
2. Enable time: Select Monday to Friday, and set start time from 18:00 and keep work in 6 hours.

3. Trigger by : You do not need to choose it, because this will be triggered every 10 minute
4. Action : Voice Alert

Setting
Record
Port Status

Name	Enable	Type	Weekday	Start	Duration	Trigger by	Prefix	Action
Trigger_voick_alert	yes	Schedule	0111110	18:0	6:0	x,x,x		VOICE

Name

Enable Yes No

Type Event Trigger Schedule Trigger, Interval (Seconds)

Enable Time Sun Mon Tue Wed Thu Fri Sat
 Start from : , Duration : ((max 168:00 hours))

Trigger by Sensor Change to active Motion Area Audio Detection

Record File Prefix (0 ~ 48 Digits)

Go Preset Tour
 Voice Alert, Duration (0~86400 Seconds)
 Alarm Out, Duration (0~86400 Seconds)
 Send FTP
 Send TCP

Add
Modify
Delete

7.1.14.2 Record

User can choose the type of record file for event or schedule application.

Field Name	Value	Range
Record File Type	Profile1 h264 / 1280x1024	-
Record File Prefix		(0 ~ 20 Digits)
Pre Trigger Duration	5	(0 ~ 20 Seconds)
Best Effort Duration	30	(1 ~ 60 Seconds)
Max File Size	1024	(256 ~ 3072 Bytes)

Record File Type:

Choose a profile to record.

Record File Prefix:

Define the prefix of recorded filename.

Pre-Trigger Duration:

Define the maximum duration of pre-alarm.

Best Effort Duration:

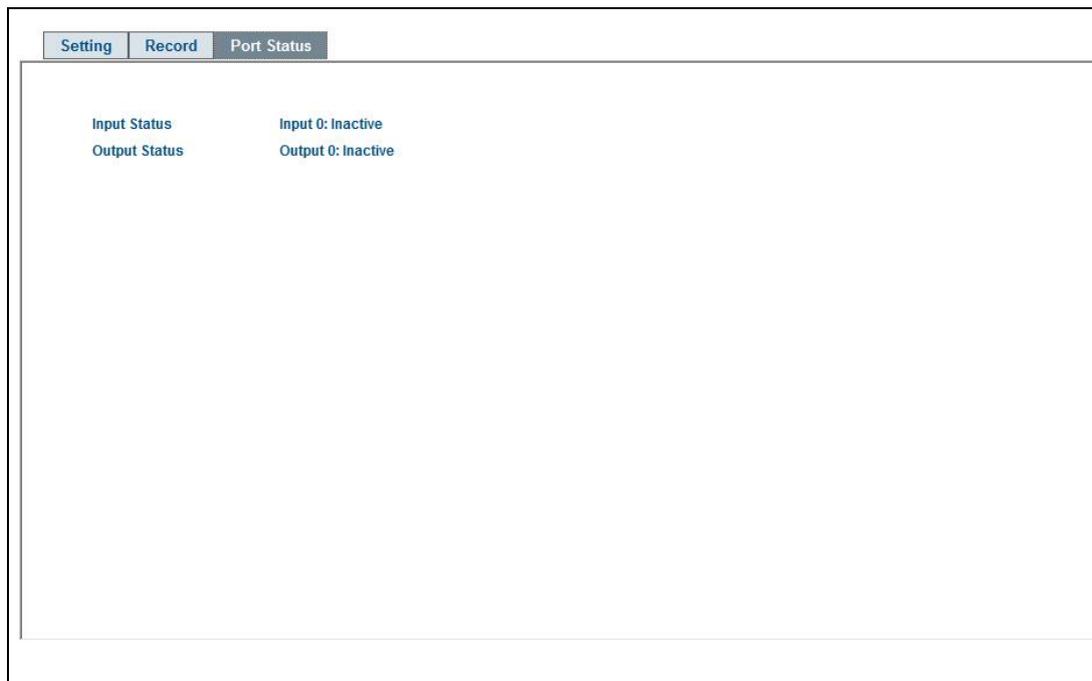
Define the best effort duration of post-alarm.

Max File Size:

Define the maximum buffer size of record file.

7.1.14.3 Port Status

User can check the status of digital input and output (DIDO).



Input Status:

Show either inactive or active.

Output Status:

Show either inactive or active.

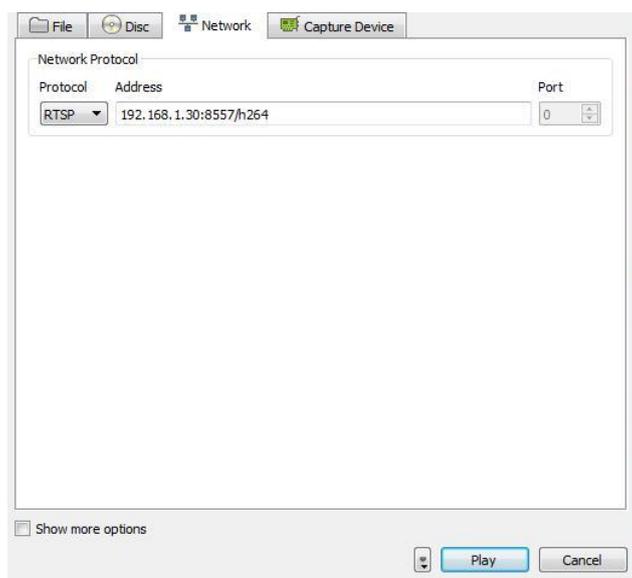
8. Using VLC Player to Access RTSP Streaming

Note 1: This information is provided for convenience only. We will not provide support for the installation or use of VLC software.

Note 2: The IP address used in the document are the default URLs and are provided for example purposes only. You will need to use an IP address that is appropriate for your network.

To use VLC player to view RTSP streaming, follow these step to proceed:

1. Download and install VLC Player (version 1.0.5) from <http://www.videolan.org/vlc>.
2. Launch VLC Player
3. Click Media _Open Network Stream.



4. On the '**Network**' tab, choose **RTSP** under the '**Protocol**' menu.
5. Enter the IP address of the stream that you want to view in the '**Address**' field.
Default URL is as below:

H.264 Profile1	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile1
MJPEG Profile2	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile2
H.264 Profile3	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile3
MJPEG Profile4	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile4
H.264 Profile5	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile5
MJPEG Profile6	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile6
H.264 Profile7	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile7
MJPEG Profile8	rtsp://192.168.1.30:554/media/media.amp?streamprofile=Profile8

6. Enter the login ID and password (admin and 1234 by default).
7. Click **Play** and you will see the image streaming.

3GPP

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 (Packet Video or Real player currently)
2. Use the following URL to access:
<rtsp://host/mpeg4/media.3gp>

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

3. Enter the login ID and password (admin and 1234 by default).

Compatible 3G mobile phone:

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

9. Specification

Video	
Sensor Type	1/4" image sensor
Active Pixels	1280 x 1024 (HxV)
Compression	H.264 / Motion JPEG
Streaming	Simultaneously multi-profile streaming
Resolution	SXGA, VGA, QVGA, 160x120 (1.3 Mega Mode); 720P, 640x360, 160x90 (720p Mode)
Max. Frame Rate	1.3MP (1280x1024) at 30 fps (NTSC/PAL)
Day/Night	Mechanical (ICR) D/N Control
Day/Night Mode	Night Mode / Day Mode / Auto / Schedule
Shutter Time	Range from 1/120s to 1/5s Selectable (60Hz); Range from 1/100s to 1/4s Selectable (50Hz)
Minimum Illumination	IR LED OFF: 1.6 Lux @50IRE (Shutter speed: 1/15 sec) IR LED ON: 0 Lux
Video Output	-
Bit Rate Control	Multi-profile bit rate control: CBR/ VBR/ ECBR/ EVBR
Lens	
Type, Focal Length, F-number	Built-in Fixed lens, f=4.2 mm, F1.8(Mega pixel lens)
View Angle	H: 50°/ V: 38° (1.3MP Mode) H: 50°/V: 26° (720p Mode)
P/T Operation	
Pan Range	355° (-177.5° ~ +177.5°)
Tilt Range	120° (-30° ~ +90°)
Manual Pan Speed	90°/ second (max); 1°/ second (min)
Manual Tilt Speed	90°/ second (max); 1°/ second (min)
Preset Speed	90°/ second (max); 1°/ second (min)
Programmable Presets	128
Stop Time	0 to 86400 seconds customized threshold
Functionalities	Auto pan mode, Auto Tour mode (up to 16 tours)
IR LEDs	
LED Quantity	12pcs (850nm)
IR Distance	3 meters (11 ft.)
IR turn on status	Customized threshold adjustable
LED Life	More than 10,000 hours (40°C)
Audio	
Audio Communication	Simplex or Full duplex (2-way audio) Selectable
Compression	RTSP: G.711 64kbps, G.726 32kbps Selectable 3GPP: AMR
Audio In/Out	Built-in microphone External microphone and speaker
Image Enhancement	

Image Settings	AWB, AES Exposure Mode: Auto/ Hold/Manual; White Balance: Auto/ Hold; Exposure Value, Sharpness, Color, Brightness, Contrast: 101 level sensitivity 3D Noise Reduction (De-Noise): Off/ On
Privacy Zone	Yes; customized threshold privacy zone (up to 8)
Image Orientation	Mirror, Flip
Frequency Control	50Hz, 60Hz
Date & Time Stamp	Yes
Test Overlay	Yes
Intelligent Video & Event Management	
Motion Detection	Up to 10 customized threshold detection windows with included or excluded options, 101 detected object size or level sensitivity
Smart Encoding	Up to 2 Configurable ROI for better picture quality and bandwidth efficiency
Others	Snapshot, e-PTZ, Optimized i-frame setting, Video Buffer
Events	Motion, audio detection, External(Sensor Trigger) alarm
Event Actions	File upload via FTP, SMTP, SAMBA(NAS) and SD Card; Notification via voice alert, email, HTTP and TCP; External output activation; Video and audio recording to SD Card or SAMBA Go Tour/ to Preset activation ICR (0~86400 Seconds) activation
Store Category	Alarm / Motion / Schedule Stores video clips and snapshots
Local Storage	
Memory Card Slot	Micro SD / Micro SDHC Card up to 32 GB
Memory Card Overwrite	Yes
Network	
Protocol	IPv4, TCP/IP, UDP, HTTP, SMTP, DNS, DHCP, NTP, FTP, RTP, RTSP, RTCP, ICMP, UPnP, IPv6, HTTPS, DDNS, ARP, Bonjour, IGMP, PPPoE, 3GPP, SAMBA
Ethernet	10/100Mbps; 10Base-T/100Base-TX Ethernet connection for LAN / WAN, RJ-45
ONVIF	YES
Browser	IE Browser 6.0 or above
Security	Two-level access with password protection; IP address filtering; HTTPS encrypted data transmission
I/O & Controls	
Power	DC Jack (2.0mm)
Alarm In/Out	Terminal Block 1 in / 1 out
Network	RJ-45 with network LED x2 (Green & Orange)
Audio In/Out	3.5mm Phone Jack 1 in / 1 out
RS-485	-
Analog Video	-
Reset	More than 5 sec for loading default

Network Camera User's Guide

Power	
Power Requirement	DC 12V ± 10%
Power Consumption (Max.)	6.5W
Mechanism	
Dimensions(WxDxH)	86 x 81 x 97 mm (3.38" x 3.19" x 3.82")
Weight	185g
Environment	
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Operating Humidity	20~ 80% RH
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Regulatory	
Approvals	CE, FCC, RoHS
Accessories	Wall mount/Ceiling mount kit with standard Package support

Appendix A: Alarm I/O Connector

Some features of the Network Camera can be activated by the external sensor that senses physical changes in the area Network Camera is monitoring. These changes can include intrusion detection or certain physical change in the monitored area. For examples, the external sensor can be a door switch or an infrared motion detector. These devices are customer provided, and are available from dealers who carry surveillance and security products. Electrically, they must be able to provide a momentary contact closure.

This device provides a general I/O terminal block with one digital input and one output for device control. The pin 1 is located at the left side of terminal block from rear view. Pin 2 and 3 can be connected to an external sensor. The input voltage will be monitored from the initial state 'LOW'. If the external sensor need 12VDC power, then it can connect to Pin1 (50mA maximum). The Alarm Output of pin 3 and 4 can be used to turn on or off the external device.

This Network Camera provides a general I/O terminal block as below:

Pin	Function
1	12VDC power supply (50mA maximum)
2	Digital Input
3	GND
4	Alarm Output

User can refer to the schematic below to make a proper connection between I/O connector and external sensor and output device.

