



LevelOne

FCS-1081 / FCS-1081A

PoE IP Camera



User Manual

Ver:2.3.0-0812

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Before You Use This Product

The use of surveillance devices may be prohibited by law in your country. The Network Camera is not only a high-performance web-ready camera but also can be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of such devices is legal before installing this unit for its intended use.

It is important to first verify that all contents received are complete according to the list in the "**Package Contents**" chapter. Take notice of the warnings in "**Quick installation guide**" before the Network Camera is installed, then carefully read and follow the instructions in the "**Installation**" chapter to avoid damages due to faulty assembly and installation. This also ensures the product is used properly as intended.

The Network Camera is a network device and its use should be straightforward for those who have basic network knowledge. The "**Troubleshooting**" chapter in the Appendix provides remedies to the most common errors in set up and configuration. You should consult this chapter first if you run into a system error.

The Network Camera is designed for various applications including video sharing, general security/surveillance, etc. The "**How to Use**" chapter suggests ways to best utilize the Network Camera and ensure proper operations.

For paragraphs preceded by  the reader should use caution to understand completely the warnings. Ignoring the warnings may result in serious hazards or injuries.

ATTENTION

1. All operation please refer to the instruction.
2. Please don't place the product on unstable desk or bracket.
3. Please avoid any liquid permeate inside of the machine in case damage the product.
4. Before wiring, please follow all electronic safety standards, and using the recommendable power supply adapter.
5. Do not let the camera aim at sun or other lighting objects no matter the camera is operating or not, otherwise it might damage the CCD camera permanently.
6. When the product is out of order, please do not try to fix it by yourself, please refer to the trouble shooting section of this instruction to figure out the problems in advance. If the problem is not found, please contact us or our authorized dealers directly.
7. All the features and functions are subject to change without notice. Please visit www.level1.com for the latest ones.

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Package Contents

- ◆ FCS-1081 / FCS-1081A
- ◆ Fixed Lens
- ◆ Camera Stand
- ◆ CD Manual/Utility
- ◆ Quick Installation Guide

Hardware Installation



Depending on the user's application, an Ethernet cable may be needed. The Ethernet cable should meet the specs of UTP Category 5 and not exceed 100 meters in length.

 Connect the power adapter jack to the Network Camera before plugging in to the power socket. This will reduce the risk of accidental electric shock.

Since FCS-1081/FCS-1081A is a PoE IP camera, it could work without attaching to power outlet as long as it connects to PoE switch.

The Network Camera will first detect Ethernet. Until the Network Camera is connected to Network, the LED will become green and flash. Operating in the Network mode, the green LED will flash every second as heartbeat to indicate alive.

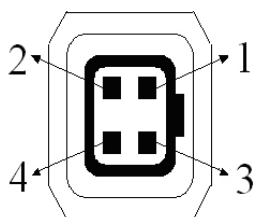
To install in Ethernet

Make sure the Ethernet is firmly connected to a switch hub. After attaching the Ethernet cable plug in the power adapter if users want to have a redundant power. If the LED turns out to be steady green after self-test, go to next paragraph "Software Installation".

To adjust the camera setting



Consult with the dealer of the peripherals for correct installation.



The Network Camera provides the auto iris lens connector. If the auto iris lens is used, the dip should be adjusted to AI option. And you also have to select VIDEO drive or DC drive lens by select correct iris mode. The pin assignment of the auto iris lens connector is as follows.

Video Drive

- 1. 12V, Power Source
- 2. Not used
- 3. IRIS
- 4. Ground

DC Drive

- 1. DAMP -
- 2. DAMP +
- 3. DRIVE +
- 4. DRIVE -

BLC / OFF

AES / AI

DD / VD

LEVEL

Back Light Control

Auto Electronic Shutter or Auto-Iris lens

DC drive or VIDEO drive auto-iris lens

Brighten or darken the video image

To adjust the lens

There is a fixed lens free bundled. Whereby revolving the lens, it can be focused on. However, users shall loosen or tighten the gray loop by using the wrench attached in the package.

1. Unscrew it first

2. Loosen or tighten the gray loop.



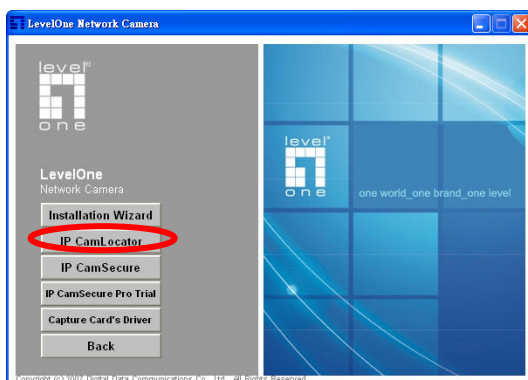
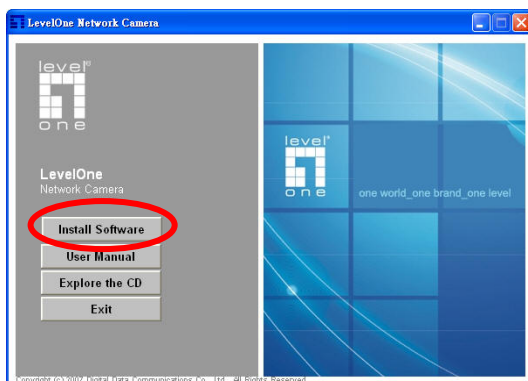
Software Installation

In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the Network Camera and grant user access to the camera.

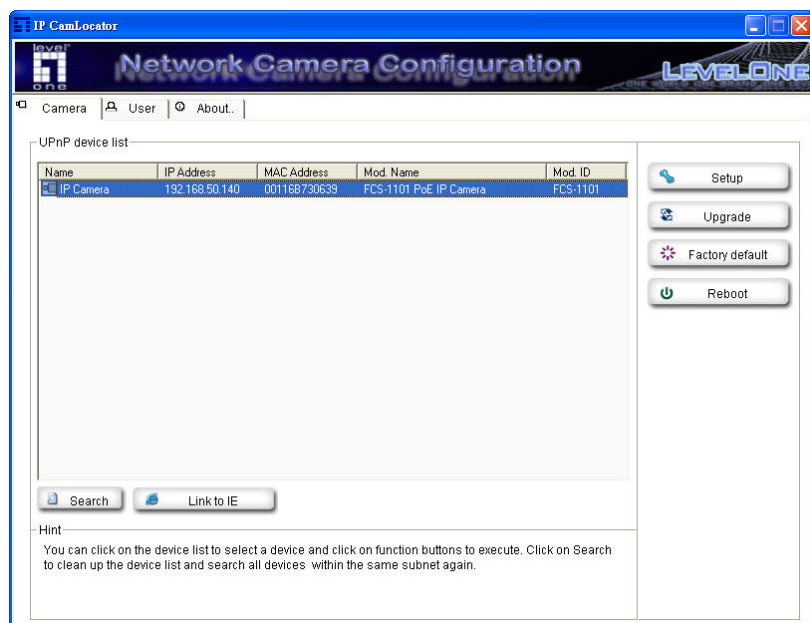
At the end of the hardware installation, the Administrator must place the product software CD into the CD-ROM drive of the PC running in MS Windows. An auto-run program will pop up (If the program is not on auto-run, go to the root directory of the software CD and click on "autorun.exe").

Install "IP CamLocator"

Click on "**Install Software**" item, after the window contains changed, click on "**IP CamLocator**" to run installation program.



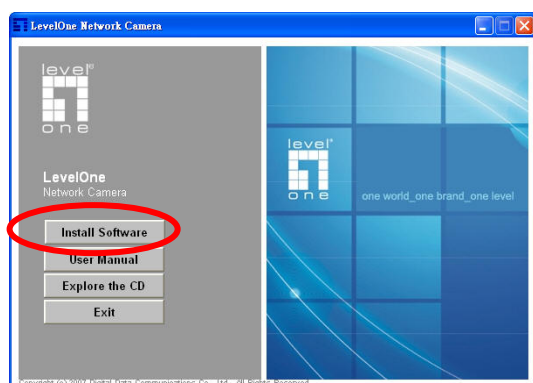
Upon IP CamLocator's start up, this program searches for LevelOne's products on the same LAN. After searching, LevelOne Video Servers or Network cameras will be located by the IP CamLocator. There may be several entries shown in the window. The Administrator may differentiate the Network cameras with the model number and MAC address.



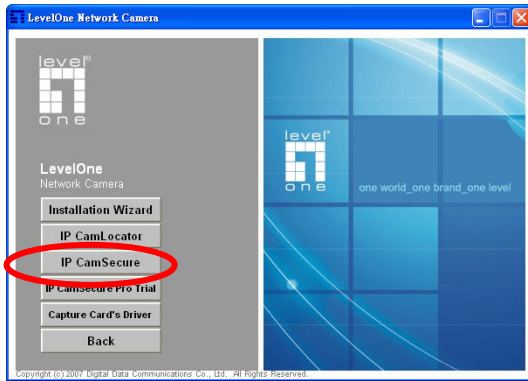
The IP addresses shown in the "IP Address" field reflect those on the local network. They may be from the DHCP server. If there is no DHCP server, the camera will try to find a free IP address (this takes from 15 second to 3 minutes, depending on the LAN status). The method of finding IP address is seeking from 192.168.0.2, to 192.168.0.254. If any of the address inside this range is free, the Network Camera will be assigned to this IP address, and its subnet mask would be 255.255.255.0.

Install “IP CamSecure”

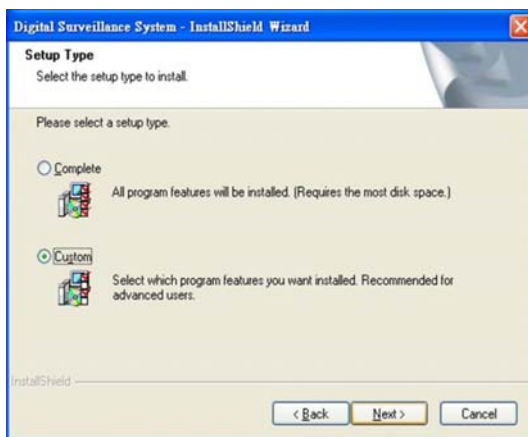
Click”Install Software”



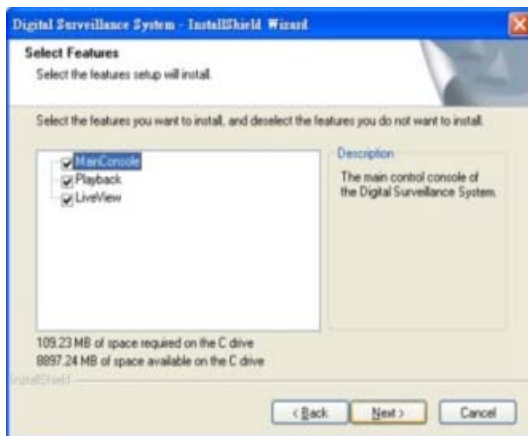
Click”IP CamSecure” and follow the onscreen instruction or refer to the user’s manual to complete installation.



Custom Setup Type:



You may install the system to the directory of your preference and choose which feature(s) you want to install to the PC.



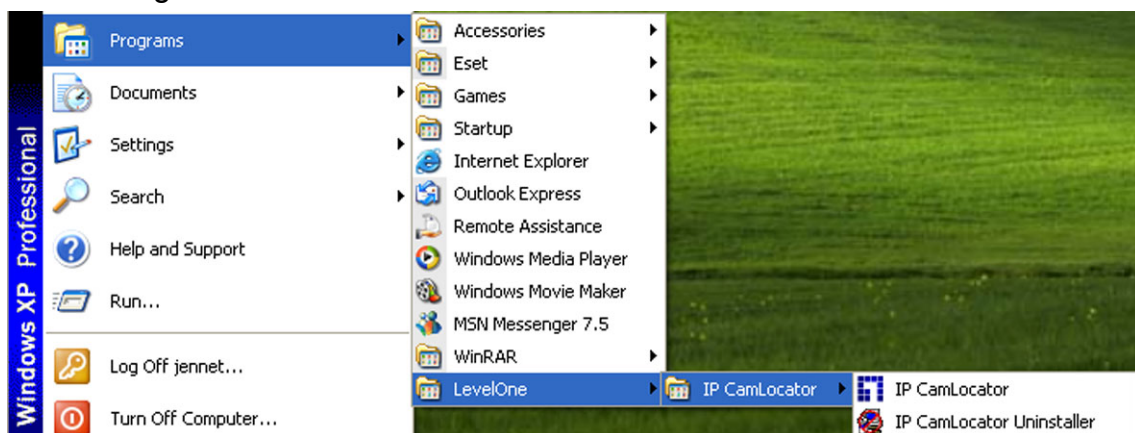
Hint: You may, for instance, install only Playback and/or LiveView on the PC at home or other remote site from which you do not install the camera but are going to watch them remotely.

How to Use IP CamLocator

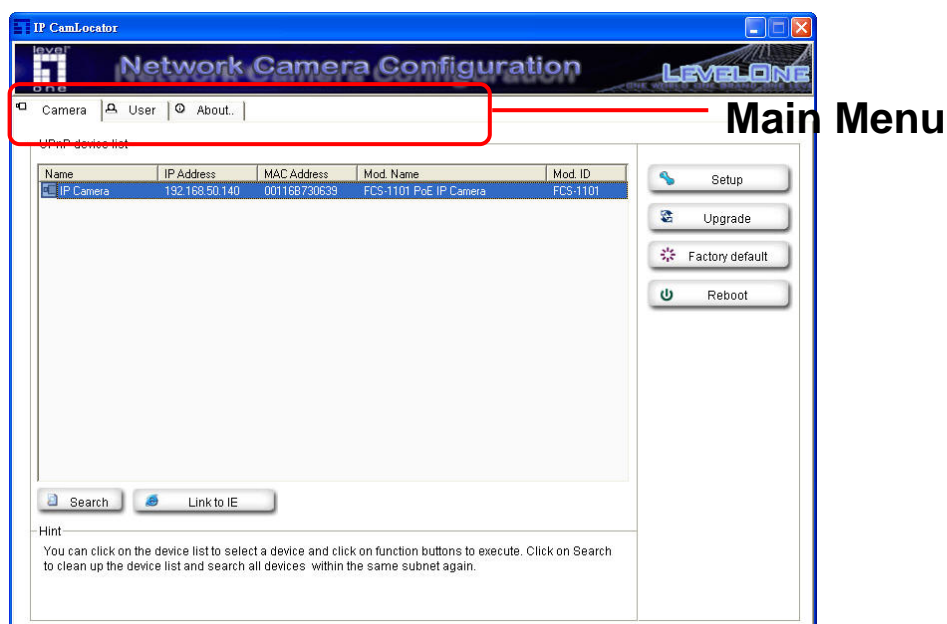
This chapter introduces how to monitor the image from the camera using **IP CamLocator**. The LevelOne video server and Network camera can be used with Microsoft web browsers and IP CamLocator in Windows operation systems. This document focuses on introducing IP CamLocator.

Initial use IP Cam Locator

Click Start -> Program Files -> LevelOne -> IP Cam Locator -> IP Cam Locator.



Configuration of Main Console



Main Menu

Camera

Click this button to get into common information of all Network cameras in network. You can connect the specific Network cameras to get live video and to optimize video setting.

User

Click this button to get into user basic setting information of all Network cameras in network. You can connect the specific Network cameras to get and set basic values. This section includes Info, User, Date Time, TCP/IP, PPPoE and DDNS.

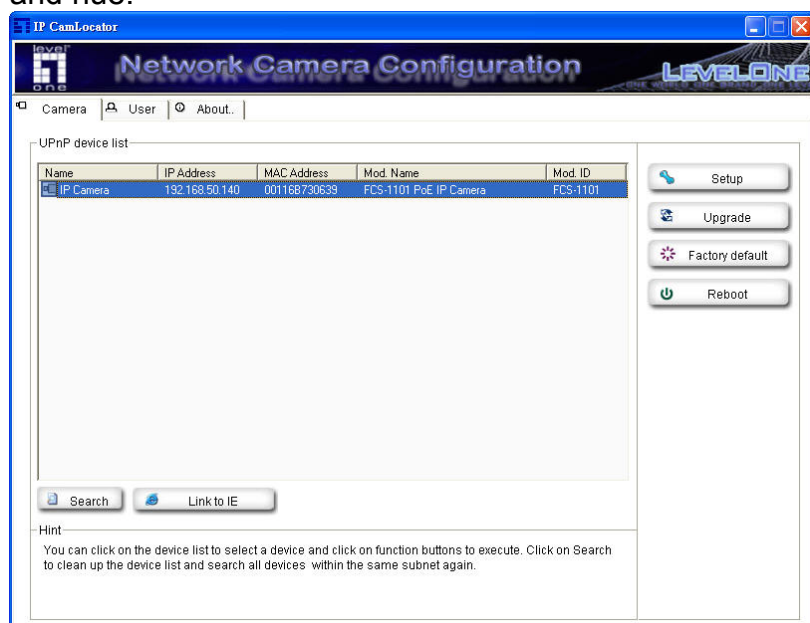
Note: Only the administrator has access to the Settings.

About

Click this button to get into information of IP CamLocator.

Camera

The Camera page provides you LevelOne network cameras in the network with information, including product name, IP address, MAC address, model name and model ID. Click on specific network cameras to optimize Video Setup including brightness, contrast, saturation and hue.



Search : Click it to search Network Cameras in the network, it displays Network Cameras information including Name, IP Address, MAC, Mod. Name and Mod. ID.

Note:

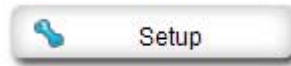
If the camera is not located in local network, it will appear in red text. Some information is not available when the IP camera is not in local network.

The IP addresses shown in the "IP Address" field reflect those on the local network. They may be from the DHCP server. If there is no DHCP server, the video server will try to find a free IP address (this takes from 15 second to 3 minutes, depending on the LAN status). The method of finding IP address is

seeking from 192.168.0.2, to 192.168.0.254. If any of the address inside this range is free, the Network Video server will be assigned to this IP address, and its subnet mask would be 255.255.255.0.

Link to IE : After searching Network Cameras in network, you can click to specific Network Cameras in search area and press **Link to IE** to use IP cameras with Microsoft web browsers.

Setup



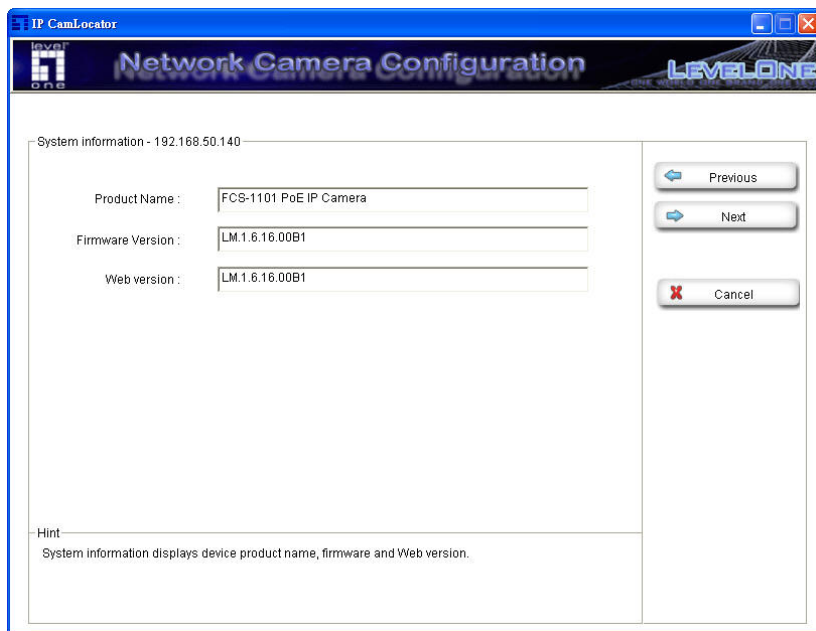
Choose a network camera, click on Setup to change the configurations. You have to key in the username and password of the administrator to enter the setup page.

The following screen will display:

Note:

For IP cameras not in local network area (which appears in red in the search screen), you can still use setup to change the configurations of these cameras.

System Information: The system information is displayed.

A screenshot of a web browser window titled "IP CamLocator". The main content area has a header "Network Camera Configuration" with a "LEVEL ONE" logo on the right. Below the header, the text "System information - 192.168.50.140" is displayed. The form contains three input fields: "Product Name" with the value "FCS-1101 PoE IP Camera", "Firmware Version" with "LM.1.6.16.00B1", and "Web version" with "LM.1.6.16.00B1". To the right of these fields are three buttons: "Previous" (with a left arrow), "Next" (with a right arrow), and "Cancel" (with a red X). At the bottom left, there is a "Hint" section that reads: "System information displays device product name, firmware and Web version."

Press "Next" to continue, "Previous" to go back, "Cancel" to go to the main page.

Account settings: The account setting is displayed. You can change the account setting here.

The screenshot shows a web browser window titled "IP CamLocator" with a "Network Camera Configuration" header. The main content area is titled "Account settings - 192.168.50.140". It contains a table for user accounts and navigation buttons.

	User name	Password	Confirm	Mode
Administrator	root	*****	*****	Admin
User 1				Admin
User 2				Admin
User 3				Admin
User 4				Admin
User 5				Admin
User 6				Admin
User 7				Admin
User 8				Admin
User 9				Admin

Viewer authentication ☒ On ☐ Off

Hint
To change the authentication account, type the new account and password and select security mode in fields.

Navigation buttons: Previous, Next, Cancel.

Press "Next" to continue, "Previous" to go back, "Cancel" to go to the main page.

Date/Time settings: You can set the date/time of the network camera here. See "Hint" for details.

IP CamLocator

Network Camera Configuration

LEVELONE

Date/Time settings - 192.168.50.140

Current Setting : 2008/ 2/13 17:31:41

PC clock : 2008/ 2/13 17:31:42

Adjust : ☐ Keep current setting
☐ Synchronize with PC
☒ Manual setting :

2008/ 1/ 1 00:00:00

☒ Synchronize with NTP :
NTP server name : pool.ntp.org ☒ Auto
Interval 01 hours.

Time zone : (GMT+08:00) Taipei

Previous

Next

Cancel

Hint
There are three ways to adjust system date and time. The easiest way is to make Network Camera Synchronize with PC. The second way Manual setting is to set the date and time manually by entering new values. The third way Synchronize with NTP is to make Network Camera automatically synchronize with timeservers over the Internet.

Press "Next" to continue, "Previous" to go back, "Cancel" to go to the main page.

Network settings: You can change the network settings of the network camera here. See “Hint” for details.

IP CamLocator

Network Camera Configuration

Network settings - 192.168.50.140

Http Port : ☒ Port 80 ☐ others (1024 - 65535)

MAC Address : 00:11:8B:73:06:39

IP Address

☒ Obtain IP automatically (DHCP)

☐ Use the following IP

IP Address :

Subnet mask :

Default Gateway :

DNS Setting

☒ Obtain DNS server automatically

☐ Use the following DNS server

Primary DNS :

Secondary DNS :

Previous **Next** **Cancel**

Hint

You can change the device HTTP port, IP address, subnet mask, default gateway, primary DNS, and secondary DNS. If you use PPPoE, skip IP address and DNS settings. Then click on Next to setup PPPoE.

Press “Next” to continue, “Previous” to go back, “Cancel” to go to the main page.

PPPoE settings: You can change the PPPoE settings here. See “Hint” for details.

The screenshot shows a web-based configuration window titled "IP CamLocator" and "Network Camera Configuration" by LEVELONE. The main heading is "PPPoE settings - 192.168.50.140".

On the left, under "PPPoE", there are radio buttons for "On" and "Off". The "Off" button is selected. Below this are four text input fields: "IP Address:", "User ID:", "Password:", and "Confirm:". The "IP Address" field contains "192.168.50.140".

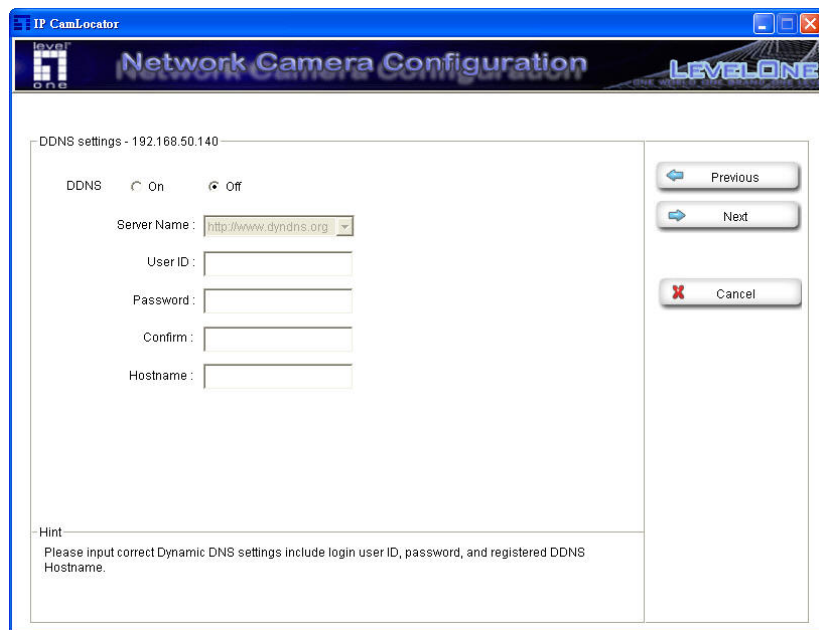
To the right of these fields is a "DNS Setting" section with two radio buttons: "Obtain DNS server automatically" (selected) and "Use the following DNS server". Below these are two text input fields: "Primary DNS:" and "Secondary DNS:", both currently empty.

On the far right, there are three buttons: "Previous" (with a left arrow), "Next" (with a right arrow), and "Cancel" (with a red X icon).

At the bottom left, there is a "Hint" section with the text: "Please input correct PPPoE settings include login user ID, password, primary DNS, and secondary DNS."

Press “Next” to continue, “Previous” to go back, “Cancel” to go to the main page.

DDNS settings: You can change the DDNS settings here.



The screenshot shows a web-based configuration interface for a network camera. The title bar reads "IP CamLocator". The main header area contains the "level one" logo on the left and "Network Camera Configuration" in the center, with "LEVEL ONE" in a stylized font on the right. The page content is titled "DDNS settings - 192.168.50.140".

On the left side, there is a section for DDNS configuration:

- A toggle switch for "DDNS" is currently set to "On".
- A "Server Name" dropdown menu is set to "http://www.dyndns.org".
- Below this are four text input fields labeled "User ID:", "Password:", "Confirm:", and "Hostname:", all of which are currently empty.

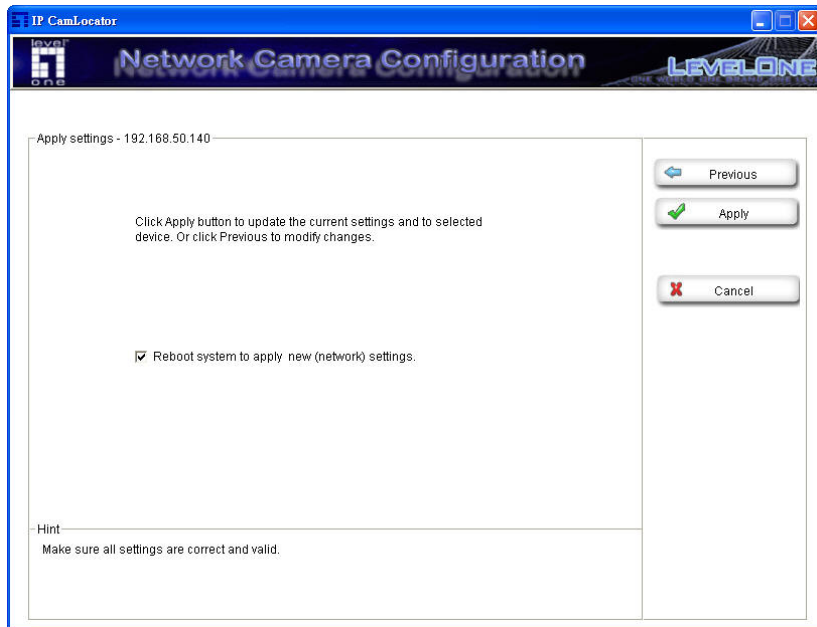
On the right side, there are three buttons:

- "Previous" with a left-pointing arrow.
- "Next" with a right-pointing arrow.
- "Cancel" with a red 'X' icon.

At the bottom left, there is a "Hint" section with the text: "Please input correct Dynamic DNS settings include login user ID, password, and registered DDNS Hostname."

Press "Next" to continue, "Previous" to go back, "Cancel" to go to the main page.


Apply settings: Click on “Apply” to use the new settings.



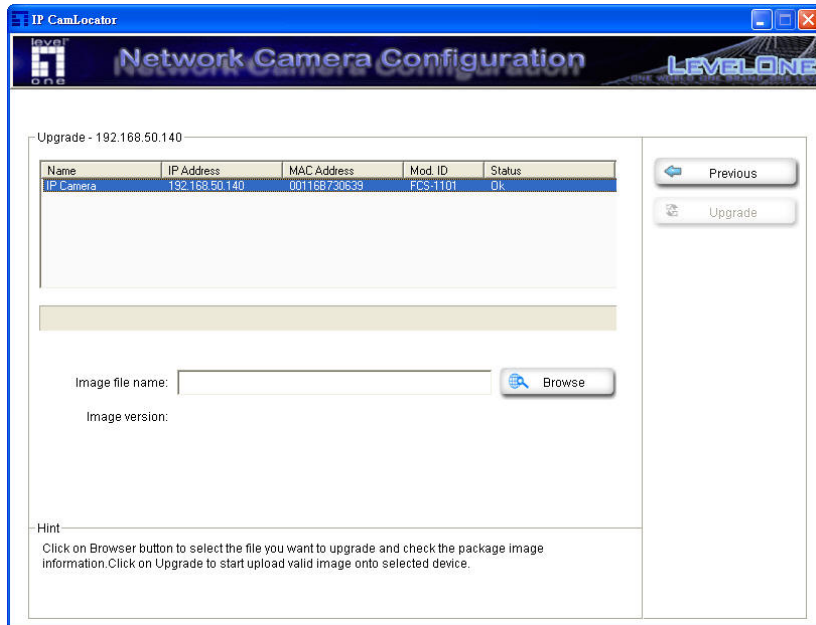
The screenshot shows a web-based configuration interface for a network camera. The title bar of the browser window reads "IP CamLocator". The page header includes the "level one" logo and the text "Network Camera Configuration". The main content area is titled "Apply settings - 192.168.50.140". It contains a large text box with the instruction: "Click Apply button to update the current settings and to selected device. Or click Previous to modify changes." Below this is a checkbox labeled "Reboot system to apply new (network) settings." which is currently checked. To the right of the text box are three buttons: "Previous" (with a left arrow icon), "Apply" (with a green checkmark icon), and "Cancel" (with a red X icon). At the bottom left, there is a "Hint" section that says "Make sure all settings are correct and valid."

Choose “Reboot system to apply new (network) settings” to reboot after the settings are applied.

Upgrade

Choose a network camera, click on Upgrade  to upgrade the firmware. You have to key in the username and password of the administrator to enter the upgrade page.

The following screen will display:



IP CamLocator

Network Camera Configuration

LEVEL ONE

Upgrade - 192.168.50.140

Name	IP Address	MAC Address	Mod. ID	Status
IP Camera	192.168.50.140	001168730639	FCS-1101	Ok

Previous

Upgrade


Image file name:  Browse


Image version:

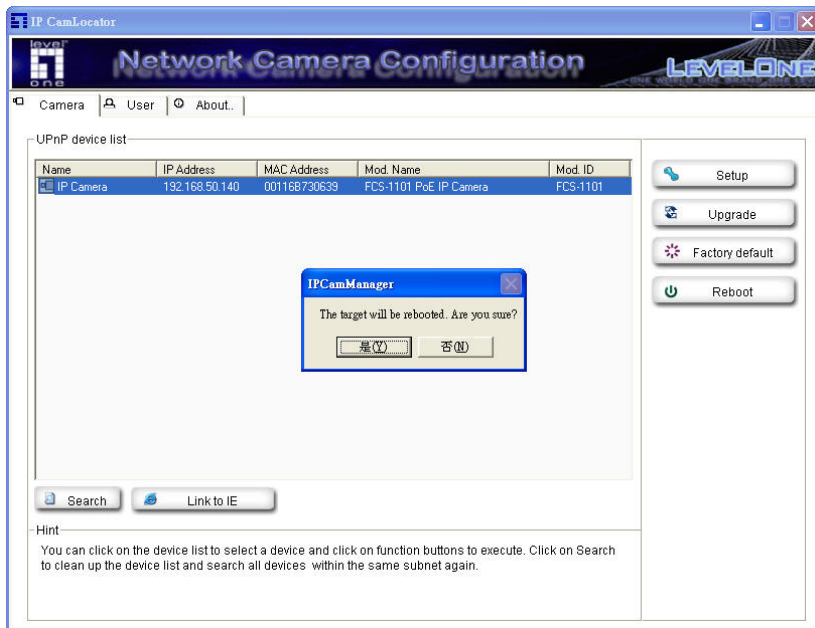
Hint

Click on Browser button to select the file you want to upgrade and check the package image information. Click on Upgrade to start upload valid image onto selected device.

Choose the firmware image file you want to upgrade and press “Upgrade” to start. The device will automatically reboot after upgrade.

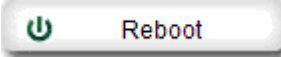
Factory Default

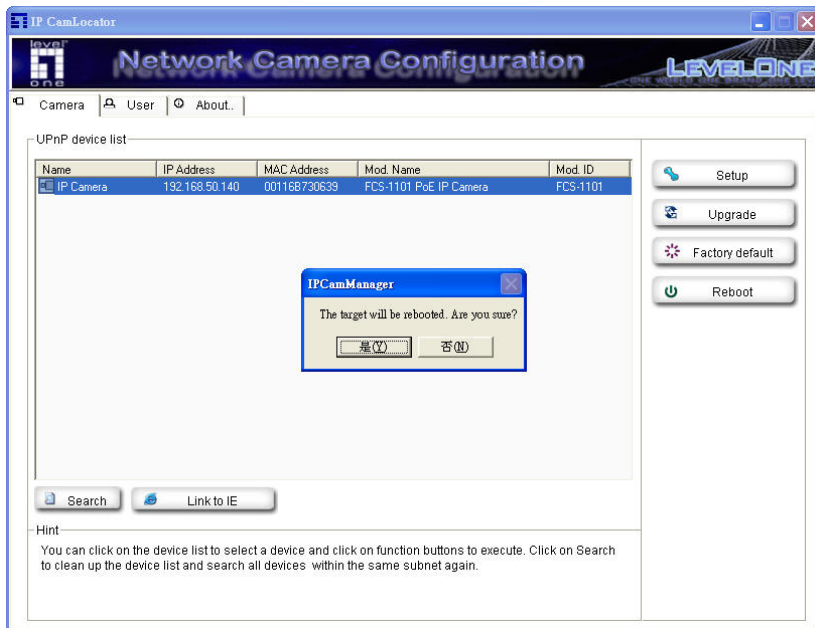
Choose a network camera, click on Factory default  to reset the configurations to default. You have to key in the user name and password to use the factory default function.



Click on "OK" to continue. The device will automatically reboot after the configurations set to default.

Reboot

Choose a network camera, click on Reboot  to reboot the device. You have to key in the user name and password to use the reboot function.



Click on "OK" to continue. The device will automatically reboot.

User

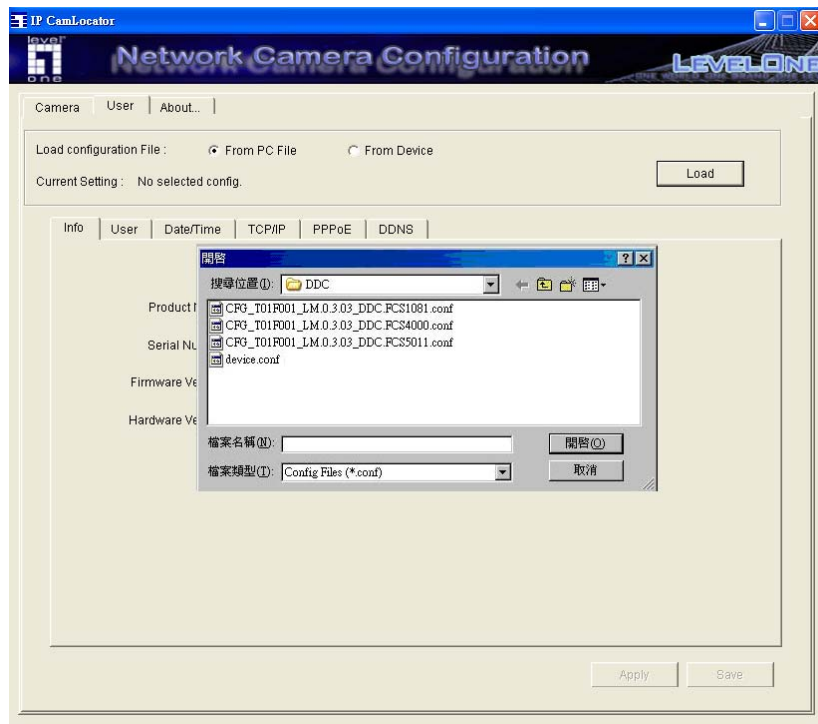
The System page provides you all Network Cameras configurations in the network with product or downloaded configuration file information, including Info, User, Date Time, TCP/IP, PPPoE and DDNS.

The screenshot shows the 'IP CamLocator' application window with the 'Network Camera Configuration' title. The 'User' tab is selected in the top navigation bar. Below the navigation bar, there are two radio buttons for 'Load configuration File': 'From PC File' (selected) and 'From Device'. A 'Load' button is to the right. Below this, the 'Current Setting' is displayed as '192.168.50.140'. The main content area has tabs for 'Info', 'User', 'Date/Time', 'TCP/IP', 'PPPoE', and 'DDNS'. The 'Info' tab is active, showing three text input fields: 'Product Name' with the value 'FCS-1101 PoE IP Camera', 'Firmware Version' with 'LM.1.6.16.00B1', and 'Web version' with 'LM.1.6.16.00B1'. At the bottom of the window, there are 'Apply' and 'Save' buttons.

Load configuration File : Select **From PC File** or **From Device**, the former can load information of downloaded configuration file and the latter can load Network Camera configurations in the network.

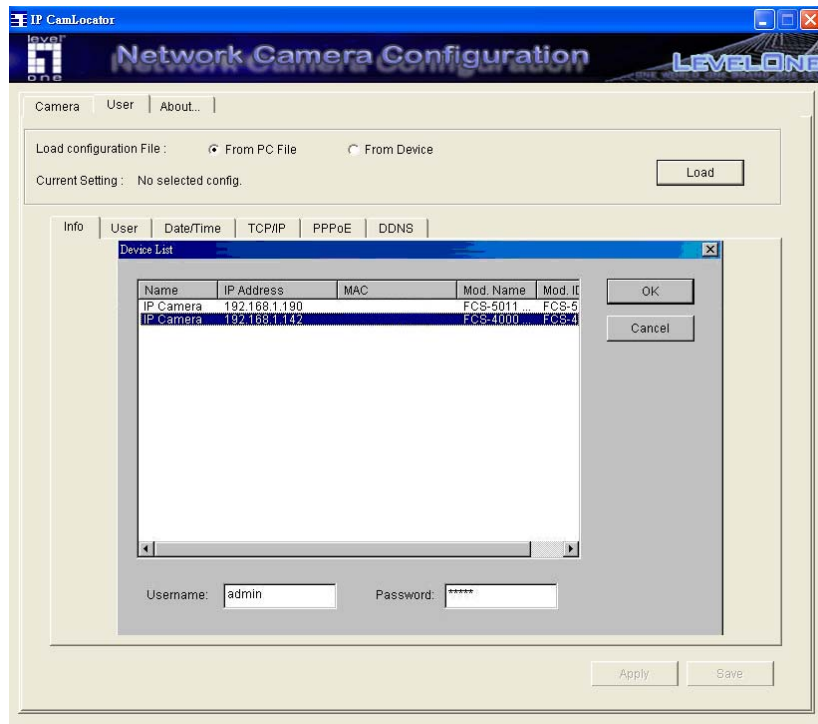
From PC File : Click it and press **Load** to select configuration location from PC.

Note: • Configuration file format is *.conf.



From Device : Click it and press **Load** to select the specific device in the network. Type the **Username** and **Password** to load configuration from device.

Note: If you have connected to the specific device before, you don't have to type the **Username** and **Password** again.



After loading, you can get configuration from PC files or devices. IP CamLocator displays the sub folders including Info, User, Date Time, TCP/IP, PPPoE and DDNS.

Info

The Info page provides you with product factory information, including Product Name, Firmware Version and Web version.

The screenshot shows the 'IP CamLocator' web interface. The title bar reads 'IP CamLocator'. The main header features the 'LEVELONE' logo and the text 'Network Camera Configuration'. Below the header is a navigation menu with tabs: 'Camera', 'User', and 'About..'. The 'About..' tab is selected. The main content area is titled 'Load configuration File :'. It has two radio buttons: 'From PC File' (unselected) and 'From Device' (selected). Below these is a 'Load' button. The 'Current Setting : 192.168.50.140' is displayed. Below the 'Load' button is a sub-menu with tabs: 'Info', 'User', 'Date/Time', 'TCP/IP', 'PPPoE', and 'DDNS'. The 'Info' tab is selected. The 'Info' tab displays three text input fields: 'Product Name : FCS-1101 PoE IP Camera', 'Firmware Version : LM.1.6.16.00B1', and 'Web version : LM.1.6.16.00B1'. At the bottom of the interface are two buttons: 'Apply' (with a green checkmark icon) and 'Save' (with a floppy disk icon).

Field	Value
Product Name :	FCS-1101 PoE IP Camera
Firmware Version :	LM.1.6.16.00B1
Web version :	LM.1.6.16.00B1

User

The Network Camera default account and password setting is “root/MAC address of IP camera (in capital letters)”. IP CamLocator provides to assign a password if the Network Camera is intended to be accessed by others. Use this menu to set the username and password of Administrator and up to 9 different users (User 1 to User 9), and the authentication access right of each group.

IP CamLocator

Network Camera Configuration

Camera User About..

Load configuration File : ☐ From PC File ☒ From Device

Current Setting : 192.168.50.140

Load

Info User Date/Time TCP/IP PPPoE DDNS

	User name	Password	Confirm	Mode
Administrator	root	*****	*****	Admin
User 1				Admin
User 2				Admin
User 3				Admin
User 4				Admin
User 5				Admin
User 6				Admin
User 7				Admin
User 8				Admin
User 9				Admin

Viewer authentication ☒ On ☐ Off

Apply Save

Username : Set a user name between 5 and 16 characters.

Password : Set a password between 5 and 16 characters.

Confirm : Re-type the password to confirm.

Mode : Set a user to **Admin**, **Operator** or **Viewer** mode.

Viewer authentication : Allows any viewer direct access to Live View.

Date/Time

The screenshot shows the 'IP CamLocator' application window with the 'Network Camera Configuration' title bar. The 'Date/Time' tab is selected. At the top, there are options to 'Load configuration File' from 'PC File' (192.168.50.140) or 'From Device', with a 'Load' button. Below this is a navigation bar with 'Info', 'User', 'Date/Time', 'TCP/IP', 'PPPoE', and 'DDNS'. The main area contains settings for 'Current Setting' (2008/ 2/13 17:17:07) and 'PC clock' (2008/ 2/13 17:17:07). Under 'Adjust', 'Keep current setting' is selected. Other options include 'Synchronize with PC', 'Manual setting' (2008/ 1/ 1 00:00:00), and 'Synchronize with NTP' (pool.ntp.org, Interval 01 hours, Auto checked). The 'Time zone' is set to '(GMT+08:00) Taipei'. 'Apply' and 'Save' buttons are at the bottom.

Current date & time : This displays the current date and time of the camera.

PC clock : This displays the date and time of the monitoring PC clock.

Adjust : Select one of four time adjusting modes.

Keep current setting : Select this mode to keep the current date and time of the camera.

Synchronize with PC : Select this mode to make the date and time of the camera the same as the monitoring PC.

Manual setting : Select this mode to manually adjust the date & time of the camera.

Synchronize with NTP : Specify the **NTP server name** and the Refresh **Interval** to synchronize the date and time of the camera with those of the time server, known as the NTP (Network Time Protocol) server.

Note:

- The NTP server (Network Time Protocol) is the time server which is an Internet standard protocol (built on top of TCP/IP) that assures accurate synchronization to the millisecond of computer clock times in a network of computers.

NTP server name : Type the host name or IP address of the NTP server, up to 64 characters.

Time zone : Select the time zone and time difference from Greenwich Mean Time in the area where the camera is installed from the pulldown box.

TCP/IP

IP CamLocator

Network Camera Configuration

LEVELONE

Camera User About...

Load configuration File : ☐ From PC File ☒ From Device

Current Setting : 192.168.50.140

Load

Info User Date/Time TCP/IP PPPoE DDNS

Http Port : ☒ Port 80 ☐ others (1024 - 65535)

MAC Address : 00:11:6B:73:06:39

IP Address

☒ Obtain IP automatically (DHCP)

☐ Use the following IP

IP Address :

Subnet mask :

Default Gateway :

DNS Setting

☒ Obtain DNS server automatically

☐ Use the following DNS server

Primary DNS :

Secondary DNS :

Apply Save

HTTP Port : Select **port 80** in general situations. If you want to use a port number other than **80**, select the text box and enter a port number between 1024 and 65535.

Note :

- When you have set the HTTP port number to a number other than 80 on the Network setting page or in the Setup Program, access the camera by typing the IP address of the camera on the web browser as follows:

Example: when HTTP port number is set to 2000 → `http://192.168.0.100:2000/`

MAC Address : Display the MAC address of the camera.

IP Address

Obtain IP automatically (DHCP) : If a DHCP server is installed on the network, to select this while the IP address is assigned by the DHCP server.

Note :

- When you set **Obtain IP automatically (DHCP)**, make sure that the DHCP server is working on the network.

Use the following IP : Select this when a fixed IP address is set.

IP Address : Enter the IP address of the camera.

Subnet mask : Enter the subnet mask.

Default Gateway : Enter the default gateway.

DNS Setting

Obtain DNS server automatically : If a DHCP server is installed on the network, to select this while the DNS server is assigned by the DHCP server.

Use the following DNS server : Select this when you set the fixed address as the IP address of DNS server.

Primary DNS : Enter the IP address of the primary DNS server.

Secondary DNS : Enter the IP address of the secondary DNS server, if necessary.

PPPoE

Use this when you connect the camera through PPPoE (Point -to- Point Protocol over Ethernet). PPPoE connection is the protocol that is widely used in xDSL (digital affiliate line such as ADSL, VDSL or SDSL) as the authentication and connection system.

The screenshot shows the 'IP CamLocator' web interface for 'Network Camera Configuration'. The title bar indicates the current IP is 192.168.50.140. The interface has tabs for 'Camera', 'User', and 'About..'. The 'User' tab is active, and within it, the 'PPPoE' sub-tab is selected. The 'Load configuration File' section shows 'From PC File' and 'From Device' options, with 'Current Setting' as 192.168.50.140 and a 'Load' button. The main configuration area has a 'PPPoE' section with 'On' and 'Off' radio buttons, 'IP Address', 'User ID', 'Password', and 'Confirm' input fields. A 'DNS Setting' section offers 'Obtain DNS server automatically' (selected) and 'Use the following DNS server' (with 'Primary DNS' and 'Secondary DNS' input fields). 'Apply' and 'Save' buttons are at the bottom.

IP Address : The IP address obtained at the PPPoE connecting with network.

User ID : Enter the user ID for authentication necessary for PPPoE connections. Type it up to 64 characters.

Password : Enter the password for authentication necessary for PPPoE connections. Type it up to 32 characters.

Confirm : Re-type the password to confirm.

Obtain DNS server automatically : Select this to obtain the address of DNS server automatically.

Use the following DNS server : Select this when you set the fixed address as the IP address of DNS server.

Primary DNS : Enter the IP address of the primary DNS server.

Secondary DNS : Enter the IP address of the secondary DNS server.

DDNS

The screenshot shows the 'IP CamLocator' application window with the title 'Network Camera Configuration'. The 'DDNS' tab is selected in the top navigation bar. Below the navigation bar, there are options to 'Load configuration File' (From PC File or From Device) and a 'Load' button. The 'Current Setting' is displayed as '192.168.50.140'. The main configuration area for DDNS includes a toggle switch for 'DDNS' (currently set to 'Off'), a 'Server Name' dropdown menu (showing 'http://www.dyndns.org'), and input fields for 'User ID', 'Password', 'Confirm', and 'Hostname'. At the bottom of the window are 'Apply' and 'Save' buttons.

Server Name : Select the DDNS Server

User ID : Enter the user ID for authentication necessary for DDNS connections. Type it up to 64 characters.

Password : Enter the password for authentication necessary for DDNS connections. Type it up to 32 characters.

Confirm : Re-type the password to confirm.

Hostname : Enter the host name that is registered to the DDNS server.

Note :

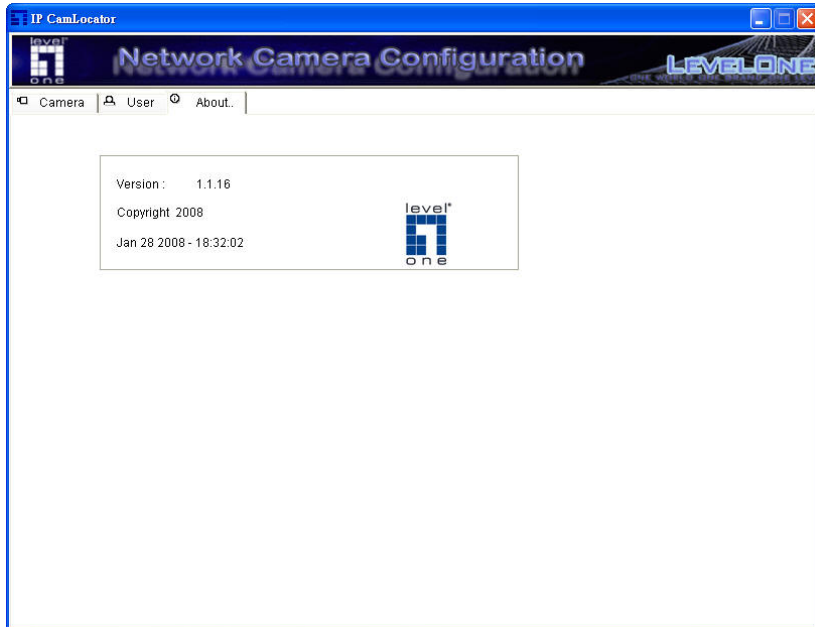
- When you want to use DDNS function, you need to register an account in DDNS server first.

About

This page displays IP CamLocator information including Version, Copyright and Product Date information

Note :

- This computer procedure is protected of the right law and international convention. Making all or part which spread a procedure again without permission, may cause serious civil and criminal sanction and mention most severe telling in accordance with the law.



How to Access to the Network Camera

This chapter introduces how to monitor the image from the camera using Microsoft web browser. The LevelOne video server and Network camera can be used with Microsoft web browsers and IP CamLocator in Windows operation systems. This section focuses on introducing camera web server. The recommended browser for Windows is Internet Explorer 6.0 or above.

The functions of the camera should be set by the Administrator.

Initial accessing the network camera

Start your web browser, and enter the IP address or host name of the network camera of LevelOne in the Location / Address field of your browser. Use the default account “root” and default password which is the MAC address (in capital letters). After successful login, there would a screen appear for ActiveX. Click “**Install**” and proceed. Then the monitor image will be displayed in your browser.



The default user name and password are set at the factory for the administrator. You can change them in the **Account** Menu under **Setting** on later pages.

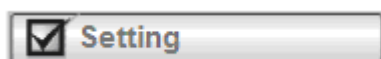
Configuration of Main Menu



Language

You can click the pulldown box to select system language, including English, Traditional Chinese, German, Danish, Greek and Korean.

Setting



This function is only for the Administrator. Click this button to get into the Basic and Advance settings menu.

Client Setting

Mode: Click the pulldown box to choose between MPEG4 and MJPEG video compression mode.

Note : MJPEG streaming is unavailable if RTSP mode is ON.

View Size: Select the desired display image resolution to 640X480 or 320X240.

Protocol: Select the transferring protocol from TCP, UDP, HTTP and Multicast.

Video Buffer: Turn the Video Buffer function On/Off. The Video Buffer function makes the streaming more smoothly in unsteady network environment, but might cause a little delay in live viewing.



Image Setup

You can use the tool bar to optimize video brightness, contrast, and saturation.



Live View

Snapshot:

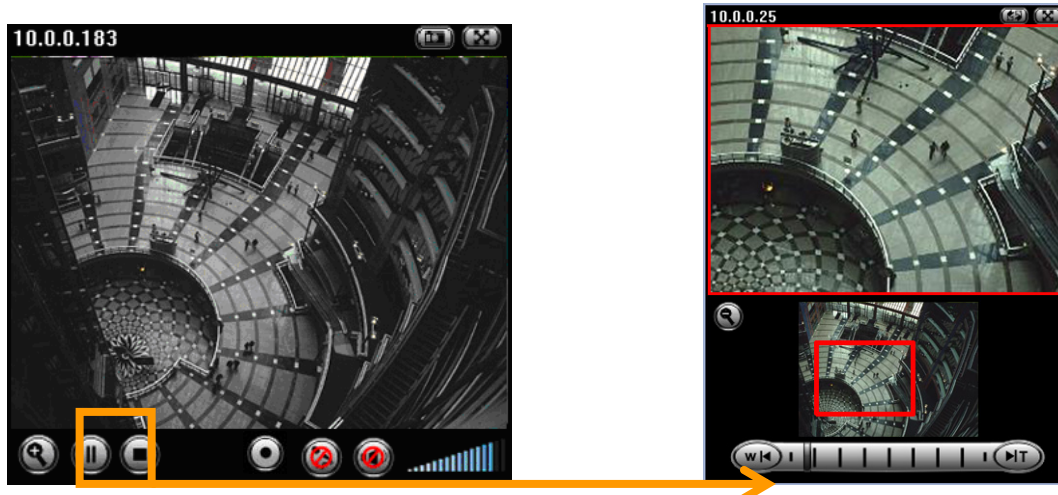
You can capture a still image shot by the camera and save it in your computer.


Press  , and a snapshot window will appear.


Click "Save" to save the picture in your computer.


Click "Close" to return to the view page.

Digital Zoom in / out the image via the monitor window



Click  to display the digital zoom in window.


Pull the  to adjust the digital zoom range, and it will be showed on the above window.

You can use the left click of your mouse to move the  to any where on the window.

Audio buttons :

 : Speakers turned on.

 : Speakers turned off.



 : Microphone turned on.

 : Microphone turned off.


 : Volume control bar.


Note :


Audio function is only available in Network cameras which support 2-way audio.


 It means the speakers of your computer are turned on to transmit the sounds from the connected IP camera(s). Similarly,  means you can broadcast to the connected IP camera(s) via the Ethernet using your microphone.

Video play buttons:

 : Pause the current video

 : Play the video.

 : Stop the current video.

 : Record the current video.

Setting

Basic

Click the “Basic” folder to display the sub folders, including System, Camera, Network, and Security.

System

Information

The Information page provides you with product factory information, including Product name, Firmware version, and Web version.



Day & Time

The screenshot shows a web interface for configuring the device's date and time. On the left is a sidebar with a 'HOME' button and a 'SETTING' menu. Under 'SETTING', there are sub-menus: 'BASIC' (expanded), 'System', 'Information', 'Date/Time' (highlighted), 'Initialize', 'Camera', 'Network', 'Security', and 'Advance'. The main content area is titled 'Day & Time' and contains several settings:

- Current date/time**: A text field showing '2008-02-13 11:20:26'.
- PC clock**: A text field showing '2008-02-13 11:20:25'.
- Date/time format**: A dropdown menu showing 'yyyy-mm-dd hh:mm:ss'.
- Adjust**: A section with four radio buttons: 'Keep current setting', 'Synchronize with PC', 'Manual setting', and 'Synchronize with NTP' (which is selected).
 - Under 'Manual setting', there are three dropdowns for year (2008), month (02), and day (13), followed by two dropdowns for hour (11) and minute (20), and a dropdown for second (17).
 - Under 'Synchronize with NTP', there is a text field for 'NTP server name' containing 'pool.ntp.org', a checked 'Auto' checkbox, and a dropdown for 'Interval' set to '1' hours.
- Time zone**: A dropdown menu showing '(GMT+08:00) Taipei'.

At the bottom right of the main content area are 'OK' and 'Cancel' buttons.

Current date & time : This displays the current date and time of the device.

PC clock : This displays the date and time of the monitoring PC clock.

Date & time format : Click the pulldown box to select among different time display formats, including yyyy-mm-dd hh:mm:ss (year-month-day hour:minute:second), mm-dd-yyyy hh:mm:ss (month-day-year hour:minute:second), and dd-mm-yyyy hh:mm:ss (day-month-year hour:minute:second).

Adjust : Select one of four time adjusting modes.

Keep current setting : Select this mode to keep the current date and time of the device.

Synchronize with PC : Select this mode to make the date and time of the device the same as the monitoring PC.

Manual setting : Select this mode to manually adjust the date & time of the device.

Synchronize with NTP : Specify the NTP server name and the Refresh Interval to synchronize the date and time of the device with those of the time server, known as the NTP (Network Time Protocol) server.

Note:

- The NTP server (Network Time Protocol) is the time server which is an Internet standard protocol (built on top of TCP/IP) that assures accurate synchronization to the millisecond of computer clock times in a network of computers.

NTP server name : Type the host name or IP address of the NTP server, up to 64 characters.

Time zone : Select the time zone and time difference from Greenwich Mean Time in the area where the device is installed from the pulldown box.

Initialize



Reboot : Click this button to reboot the device. A confirmation dialogue will appear. Click OK to proceed. It takes about two minutes to reboot the device.

Factory default : Click this button to reset the device to the factory default settings. A confirmation dialogue will appear. Click OK to proceed, the network indicator on the device will start to blink. After completing adjustments to the default settings, the device will reboot automatically. Do not turn off the device until the device reboots.

Backup setting data : Save the setting data of the device to a file. Click Save, and follow the instructions on the browser to save the setting data file to your specified location.

Restore setting : Load the saved setting data of the device. Click Browse and select the file in which the setting data is stored. Click OK, and the device is adjusted according to the loaded data and restarted.

Firmware update : Upgrade the device software. Click Browse and select the file for upgrading. A confirmation dialogue will appear. Click OK to start upgrading. The device will reboot upon completion.

Note:

- Use only upgrade files that are special for this device. Problems may occur otherwise.
- Do not turn off the device power or disconnect the network until the upgrading is completed.

Camera

General

HOME

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BASIC

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Camera

General

MPEG4

MJPEG

Network

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Advance

RTSP ☒ On ☐ Off

Image rotate None

Deinterlace Filter ☐ On ☒ Off

Overlay ☒ Text overlay ☐ Privacy mask ☐ Off

Text color White

Background color Black

Alias

Date/Time ☐ On ☒ Off

Display position ☒ Top ☐ Bottom

OK Cancel

RTSP: Switch the RTSP streaming On/Off.

Note :

- RTSP: Real Time Streaming Protocol. RTSP is supported by most of the media clients . (RealPlayer, Media Player, QuickTime, etc...)

Deinterlace Filter : Switch the deinterlace filter on/off.

Overlay : Select to add Text Overlay or Privacy Mask on/off the display screen.

Text Overlay : Enables users to see some information on the display screen, including Date/Time and user-defined text. You can also change the background color.

Privacy Mask : Enables users to conceal an area of the video image.

MPEG4

Computer View



MPEG4 viewer port (If RTSP mode is OFF)

Unicast streaming Video/Audio port number : Specify the transmission port number of the video data. It is initially set to 8090. Specify an even number from 1024 to 65534.

Image Size : Specify the image size the network camera transmits. You can choose among 704 × 480, 352 × 240 and 176 × 120 for NTSC mode and 704 × 576, 352 × 288 and 176 × 144 for PAL mode.

Frame rate : Set the frame rate of the MPEG4 image. Selectable values are 5, 10, 15, 20, 25, 30 fps. The unit “fps” stands for “frames sent per second”.

Quality

Auto : The quality and bitrate will be automatically decided according to the frame rate.

Fixed Quality : The selectable values are Medium, Standard, Good, Detailed and Excellent.

Fixed Bitrate : Set the bit rate of MPEG4 image transmission for a line. Selectable values are 64, 128, 256, 384, 512, 768, 1024, 1280, 1536 and 2048 kbps.

Note :

- The selected frame rate and bit rate are a tentative value. The actual frame rate and bit rate may be different according to the image size, the shooting scene or the network condition.

RTSP

RTSP port ☒ 554 ☐ (1024 ~ 65535)

Viewer authentication ☐ On ☒ Off

RTP

Unicast streaming

Port range (1024 ~ 65532) ~ (1027 ~ 65535)

Multicast streaming ☒ On ☐ Off

Multicast address

Video port ☐ Auto ☒ (1024 ~ 65535)

Audio port ☐ Auto ☒ (1024 ~ 65535)

Time-To-Live (1 to 255)

Image Size

Frame rate fps

Quality

☐ Auto

☒ Fixed quality

☐ Fixed bitrate kbps

RTSP (If RTSP mode is ON)

RTSP port: Specify the transmission port number of RTSP streaming video. Default value is 554.

Viewer authentication: If the viewer authentication is ON, users viewing through RTSP will be requested to key-in username and password.

RTP (If RTSP mode is ON)

Unicast streaming:

Unicast streaming Video/Audio port range: Specify the transmission port range of RTP streaming video.

RTP will select a port randomly from the range.

Multicast streaming:

Multicast address: Specify the multicast server address.

Video / Audio Port: Specify the transmission port number of the video data. Specify an even number from 1024 to 65534.

Time-To-Live: Set the maximum TTL that multicast can pass through.

MPEG4 viewer port (If RTSP mode is OFF)

Unicast streaming Video/Audio port number : Specify the transmission port number of the video data. It is initially set to 8090. Specify an even number from 1024 to 65534.

Image Size : Specify the image size the network camera transmits. You can choose among 704 × 480, 352 × 240 and 176 × 120 for NTSC mode and 704 × 576, 352 × 288 and 176 × 144 for PAL mode.

Frame rate : Set the frame rate of the MPEG4 image. Selectable values are 5, 10, 15, 20, 25, 30 fps. The

unit “fps” stands for “frames sent per second”.

Quality

Auto : The quality and bitrate will be automatically decided according to the frame rate.

Fixed Quality : The selectable values are Medium, Standard, Good, Detailed and Excellent.

Fixed Bitrate : Set the bit rate of MPEG4 image transmission for a line. Selectable values are 64, 128, 256, 384, 512, 768, 1024, 1280, 1536 and 2048 kbps.

Note :

- The selected frame rate and bit rate are a tentative value. The actual frame rate and bit rate may be different according to the image size, the shooting scene or the network condition.

Mobile View

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RTSP

RTSP port ☐ 554 ☒ 8554 (1024 ~ 65535)

RTP

Unicast streaming

Port range (1024 ~ 65532) ~ (1027 ~ 65535)

Multicast streaming ☒ On ☐ Off

Multicast address

Video port ☐ Auto ☒ 10000 (1024 ~ 65535)

Audio port ☐ Auto ☒ 11000 (1024 ~ 65535)

Time-To-Live (1 to 255)

Image Size

Frame rate fps

Quality

☐ Auto

☐ Fixed quality

☒ Fixed bitrate kbps

OK Cancel

RTSP (If RTSP mode is ON)

RTSP port: Specify the transmission port number of RTSP streaming video. Default value is 8554.

RTP (If RTSP mode is ON)

Unicast streaming:

Unicast streaming Video/Audio port range: Specify the transmission port range of RTP streaming video. RTP will select a port randomly from the range.

Multicast streaming:

Multicast address: Specify the multicast server address.

Video / Audio Port: Specify the transmission port number of the video data. It is initially set to 10000 and

11000. Specify an even number from 1024 to 65534.

Time-To-Live: Set the maximum TTL that multicast can pass through.

Image Size: The Image size of Mobile view is fixed at 176x120.

Frame rate : Set the frame rate of the MPEG4 image. Selectable values are 5, 10, 15, 20 fps. The unit “fps” stands for “frames sent per second”.

Quality

Fixed Bitrate : Set the bit rate of MPEG4 image transmission for a line. Selectable values are 64, 32, and 16kbps..

MJPEG

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MJPEG viewer port

Unicast streaming

Video/Audio port number 8070 (1024 ~ 65534)

Video/Audio port number(SSL) 8071

Image Size 704x480

Frame rate 15 fps

Quality

☐ Auto

☒ Fixed quality Excellent

OK Cancel

Note :

- MJPEG settings are unavailable if the RTSP mode is ON, which means the MJPEG streaming is closed.

MJPEG viewer port

Unicast streaming Video/Audio port number : Specify the transmission port number of the video data. It is initially set to 8070. Specify an even number from 1024 to 65534.

Note :

- Unicast streaming : Specify the transmission port number of the video data and audio data used when UDP (Unicast) is selected with the TCP/UDP transmission switching icon in the main viewer.

Image Size : Specify the image size the network camera transmits. You can choose among 704 × 480, 352 × 240 and 176 × 120 for NTSC mode and 704 × 576, 352 × 288 and 176 × 144 for PAL mode.

Frame rate : Set the frame rate of the MJPEG image. Selectable values are 5, 10, 15 fps. The unit “fps” stands for “frames sent per second”.

Quality

Auto : The quality will be automatically decided.

Fixed quality : The selectable values are Medium, Standard, Good, Detailed and Excellent.

Network

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MAC address 00:11:6B:73:06:39

☒ Obtain an IP address automatically (DHCP)

☐ Use the following IP address

☐ Obtain DNS server address automatically

☒ Use the following DNS server address

Primary DNS server 0.0.0.0

Secondary DNS server 0.0.0.0

HTTP port number ☒ 80 (1024 to 65535)

OK Cancel

MAC address : Display the MAC address of the device.

Obtain an IP address automatically (DHCP) : If a DHCP server is installed on the network, to select this while the IP address is assigned by the DHCP server.

Note :

- When you set Obtain an IP address automatically (DHCP), make sure that the DHCP server is working on the network.

Use the following IP address : Select this when a fixed IP address is set.

IP address : Enter the IP address of the device.

Subnet mask : Enter the subnet mask.

Default gateway : Enter the default gateway.

Use the following DNS server address : Select this when you set the fixed address as the IP address of DNS server.

Primary DNS server : Enter the IP address of the primary DNS server.

Secondary DNS server : Enter the IP address of the secondary DNS server, if necessary.

HTTP port number : Select 80 in general situations. If you want to use a port number other than 80, select the text box and enter a port number between 1024 and 65535.

Note :

- When you have set the HTTP port number to a number other than 80 on the Network setting page or in the Setup Program, access the device by typing the IP address of the device on the web browser as

follows:

Example: when HTTP port number is set to 2000 → <http://192.168.1.100:2000/>

PPPoE

Use this when you connect the device through PPPoE (Point -to- Point Protocol over Ethernet). PPPoE connection is the protocol that is widely used in xDSL (digital affiliate line such as ADSL, VDSL or SDSL) as the authentication and connection system.

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PPPoE ☒ On ☐ Off

IP address

User ID

Password

Re-type password

☐ Obtain DNS server address automatically

☒ Use the following DNS server address

Primary DNS server

Sencodary DNS server

OK Cancel

IP address : The IP address obtained at the PPPoE connecting with network.

User ID : Enter the user ID for authentication necessary for PPPoE connections. Type it up to 64 characters.

Password : Enter the password for authentication necessary for PPPoE connections. Type it up to 32 characters.

Re-type password : Re-type the password to confirm.

Obtain DNS server address automatically : Select this to obtain the address of DNS server automatically.

Use the following DNS server address : Select this when you set the fixed address as the IP address of DNS server.

Primary DNS server : Enter the IP address of the primary DNS server.

Secondary DNS server : Enter the IP address of the secondary DNS server.

DDNS

The screenshot shows a web interface for configuring DDNS. On the left is a sidebar with a 'HOME' button at the top. Below it is a 'SETTING' section with a dropdown arrow. Under 'SETTING', there are several options: 'BASIC' (with a dropdown arrow), 'System', 'Camera', 'Network' (with a dropdown arrow), 'Information', 'PPPoE', 'DDNS' (highlighted in blue), 'UPnP', 'IP Notification', 'Security', and 'Advance'. The main content area on the right is titled 'DDNS' and has two radio buttons: 'On' (selected) and 'Off'. Below this are five input fields: 'Server name' (a dropdown menu), 'User ID', 'Password', 'Re-type password', and 'Host name'. At the bottom right of the main area are two buttons: 'OK' and 'Cancel'.

Server name : Choose the DDNS Server from the list.

User ID : Enter the user ID for authentication necessary for DDNS connections. Type it up to 64 characters.

Password : Enter the password for authentication necessary for DDNS connections. Type it up to 32 characters.

Re-type password : Re-type the password to confirm.

Host name : Enter the host name that is registered to the DDNS server.

Note :

- When you want to use DDNS function, you need to register an account in DDNS server first.

UPnP

The device includes support for UPnP, which is enabled by default. If also enabled on your computer, the device will automatically be detected and a new icon will be added to “My Network Places.” It provides port forwarding for opening a port in a router or firewall in a private network in order to let a party from the outside world contact a user inside.

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UPnP ☒ On ☐ Off

☒ Turn On UPnP port forwarding

HTTP port ☒ 80 ☐ (1024 ~ 65535)

SSL Port ☒ 443 ☐ (1024 ~ 65535)

MPEG4 viewer port (1024 ~ 65535)

MPEG4 viewer port(SSL) (1024 ~ 65535)

MJPEG viewer port (1024 ~ 65535)

MJPEG viewer port(SSL) (1024 ~ 65535)

MPEG4 RTSP port

Computer view (1024 ~ 65535)

Mobile view (1024 ~ 65535)

OK Cancel

HTTP port : Enter the HTTP port number and default HTTP port is 80.

SSL port: Enter the SSL port number and default SSL port is 443.

MPEG4 viewer port : Enter the MPEG4 viewer port number and default MPEG4 viewer port is 8090.

MPEG4 viewer port(SSL): Enter the MPEG4 SSL viewer port and default is 8091.

MJPEG viewer port : Enter the MJPEG viewer port number and default MJPEG viewer port is 8070.

MJPEG viewer port(SSL): Enter the MPEG4 SSL viewer port and default is 8071.

MPEG4 RTSP port: Enter the MPEG4 RTSP port, default value is 8050 for computer view, 8030 for mobile view.

IP Notification

When network notify type is set to On, you can send an e-mail notification of the completion of the network setting.

IP Notification ☒ On ☐ Off

Notify type ☒ DHCP ☐ Static IP ☐ PPPoE

SMTP server name

Authentication ☒ On ☐ Off

☒ SMTP ☒ POP before SMTP

POP server name

User name

Password

Recipient e-Mail address

Administrator e-Mail address

Subject

Message

OK Cancel Test Help

Notify type : Select type of DHCP, Static IP and PPPoE will notify.

SMTP server name : Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

Authentication : Select the authentication required when you send an email.

Off: Select if no authentication is necessary when an email is sent.

On: When authentication is necessary an e-mail is sent, select one of the authentication methods from the followings.

SMTP: Select if SMTP authentication is necessary when an e-mail is sent.

POP before SMTP: Select if POP before SMTP authentication is necessary when an e-mail is sent.

Note :

- When you set to On, be sure to select either or both SMTP or/and POP before SMTP.

POP server name : It is necessary when the POP before SMTP is selected in Authentication. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.

User name, Password : Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.

Recipient e-mail address : Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.

Administrator e-mail address : Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.

Subject : Type the subject/title of the e-Mail up to 64 characters. With respect to mail which is sent according to the IP notification.

Message

Type the text of the E-mail up to 384 characters. Default value provides network information including IP, Port, MAC, Model, Firmware Version and Web Version.

Security

Account

The device default account and password setting is “root/MAC address of IP camera (in capital letters)”. That means everyone might access the device including the configuration as long as the IP address is known. It is necessary to assign a password if the device is intended to be accessed by others. Use this menu to set the user names and passwords of Administrator and up to 9 different users (User 1 to User 9), and the access right of each user.

User ID	User name	Password	Re-type Password	Viewer mode
Administrator	root	••••••••••	••••••••••	Admin
User 1				Admin
User 2				Admin
User 3				Admin
User 4				Admin
User 5				Admin
User 6				Admin
User 7				Admin
User 8				Admin
User 9				Admin

Viewer authentication ☒ On ☐ Off

OK Cancel

User name : Set a user name between 5 and 16 characters.

Password : Set a password between 5 and 16 characters.

Re-type password : Re-type the password to confirm.

Viewer Mode : Set a user to Admin, Operator or Viewer mode.

Viewer authentication : Allows any viewer direct access to Live View.

HTTPS

HTTPS is a URI scheme used to indicate a secure HTTP connection. It is syntactically identical to the http:// scheme normally used for accessing resources using HTTP. Using an https: URL indicates that HTTP is to be used, but with a different default TCP port (443) and an additional encryption/authentication layer between the HTTP and TCP. You can use the IP camera through HTTPS easily by using https:// instead of http://.



Create & Install: Create a self-signed certificate for HTTPS to recognize.

Installed Certificate: Display or remove the properties of the installed certificate.

HTTPS Connection Policy: Set HTTPS connection policy for different level of users.

Advance

FTP Client

Use this menu to set up for capturing and sending images to an FTP server. By using FTP client function, you can send the image and audio file which has been shot and recorded linked with the external sensor input or with the built-in motion detection function to FTP server. FTP client setting menu is composed of two tabs, General, Alarm sending and Periodical sending.

General

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SETTING

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FTP client

General

Alarm sending

Periodical sending

SMTP

HTTP event

Schedule

Alarm buffer

Motion detection

System Log

FTP client ☒ On ☐ Off

FTP server name

User name

Password

Re-type password

Passive mode ☐ On ☒ Off

OK Cancel Test

FTP client function : To activate the FTP client function, select On. The FTP client setting page appears. When you do not wish to use the FTP client function, select Off.

Note :

- The frame rate and operability on the main viewer may decrease while a file is being transmitted by the FTP client function.

FTP server name : Type the FTP server name to upload still images up to 64 characters, or the IP address of the FTP server.

User name : Type the user name for the FTP server.

Password : Type the password for the FTP server.

Retype password : To confirm the password, type the same characters as you typed in the Password box.

Passive mode : Set whether you use the passive mode of FTP server or not when connecting to FTP server. Select On to connect to FTP server using the passive mode.

Attached file type : Set attached file type to MJPEG or MPEG.4

Alarm sending

Set to forward the image and audio file to the specified FTP server linked with the alarm detection by the external sensor input or by the built-in motion detection function. Select On to send the image and audio file to FTP server linked with the alarm detection.

The screenshot shows a web interface for configuring alarm sending. On the left is a sidebar menu with 'HOME' at the top, followed by 'SETTING'. Under 'SETTING', there are several options: 'BASIC', 'Advance', 'FTP client', 'SMTP', 'HTTP event', 'Schedule', 'Alarm buffer', 'Motion detection', and 'System Log'. The 'FTP client' section is expanded, showing 'General', 'Alarm sending' (which is highlighted), and 'Periodical sending'. The main content area is titled 'Alarm sending' and has a toggle switch set to 'On'. Below this, there are input fields for 'Remote path' and 'Image file name'. A 'Suffix' section has two radio buttons: 'Date Time' and 'Sequence number', with 'Sequence number' selected. There is a 'Sequence number clear' button with a 'Clear' label. The 'Alarm' section has two checked checkboxes: 'Motion detection' and 'Use alarm buffer', each with a corresponding button labeled 'Motion detection' and 'Alarm buffer' respectively. The 'Effective Period' section has two radio buttons: 'Always' and 'Schedule', with 'Schedule' selected. There are 'OK' and 'Cancel' buttons at the bottom.

Remote path : Type the path to the destination in FTP server up to 64 characters.

Image file name : Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

Suffix : Select a suffix to add to the file name:

Date & time: The date & time suffix is added to the Image file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.

Sequence number: A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.

Motion Detection : Click it on for using Motion Detection function as a sensor. You can set the motion detection function page.

Note :

- Motion Detection works only when the Video mode is set to MPEG4 and the Cropping is set to Off.

Alarm Buffer : Select Use alarm buffer when you forward the image/ audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click Alarm buffer to display the Alarm buffer setting menu. For details, see "Setting the Alarm Buffer — Alarm buffer setting Menu on page.

Effective period : Set the period when the periodical sending is effective.

Always : The periodical sending is always effective.

Schedule : You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click Schedule and the setting menu for the effective period is displayed.

Periodical sending

You can set to send an image file to FTP server periodically by selecting On to send the image file to FTP server linked with setting period.

Remote path : Type the remote path up to 64 characters.

Image file name : Type the file name of the image sent to FTP server up to 10 alphanumeric characters, - (hyphen) and _ (under score).

Suffix : Select a suffix to be added to the file name sent to FTP server.

None : The name of the sent file will be the Image file name.

Date & time : The date & time suffix is added to the Image file name. The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.

Sequence number : A consecutive number is added to the Image file name.

Sequence number clear : Click Clear and the suffix of the sequence number returns to 1.

Interval : Set the periodical sending is effective interval. Min value is 1 min and Max value is 24 hour.

Effective period : Set the period when the periodical sending is effective.

Always : The periodical sending is always effective.

Schedule : You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click Schedule and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 34)

SMTP

Set the SMTP menu when you want to send an image via e-mail. By using Mail (SMTP) function, you can send a mail with attached image which has been shot linked with the external sensor input or with the built-in motion detection function. The image file can also be sent periodically. E-Mail (SMTP) setting menu is composed of three tabs, General, Alarm sending and Periodical sending.

General

Select On when you use the SMTP function. The common setting options are displayed below. If you do not wish to use the e-Mail (SMTP) function, select Off and click OK.

HOME

SETTING

- BASIC
- Advance
 - FTP client
 - SMTP
 - General
 - Alarm sending
 - Periodical sending
- HTTP event
- Schedule
- Alarm buffer
- Motion detection
- System Log

e-Mail (SMTP) ☒ On ☐ Off

SMTP server name

Authentication ☒ On ☐ Off

☒ SMTP ☒ POP before SMTP

POP server name

User name

Password

Recipient e-Mail address

Administrator e-Mail address

Subject

Message

OK Cancel Test

Note :

- During transmission of an image file via mail, the frame rate and operation performance of the monitor image of the main viewer decline.
- While the camera video mode is set to MPEG4, the image of the composite video signal output from the video output connector of the camera may be distorted during mail transmission.
- You cannot send an audio file by using the mail sending function.

SMTP server name : Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

Authentication : Select the authentication required when you send an email.

Off: Select if no authentication is necessary when an email is sent.

On: When authentication is necessary an e-mail is sent, select one of the authentication methods from the

followings.

SMTP: Select if SMTP authentication is necessary when an e-mail is sent.

POP before SMTP: Select if POP before SMTP authentication is necessary when an e-mail is sent.

Note :

- When you set to On, be sure to select either or both SMTP or/and POP before SMTP.

POP server name : It is necessary when the POP before SMTP is selected in Authentication. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.

User name, Password : Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.

Recipient e-mail address : Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.

Administrator e-mail address : Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.

Attached File Type: Select to attach the file as JPEG or MPEG4.

Subject : Type the subject/title of the e-Mail up to 64 characters. With respect to mail which is sent according to the alarm detection when Alarm sending of the alarm tab is set to On, the characters standing for the sensor type added to the subject.

Message : Type the text of the E-mail up to 384 characters. (A line break is equivalent to 2 characters.)

Alarm sending

Set to send the mail with connection to the alarm detection by the external sensor input or by the built-in motion detection function.

The screenshot shows a web interface for configuring alarm sending. On the left is a sidebar menu with 'HOME' at the top, followed by 'SETTING'. Under 'SETTING', there are sub-menus: 'BASIC', 'Advance', 'FTP client', 'SMTP', and 'Periodical sendin'. The 'SMTP' menu is expanded, showing 'General' and 'Alarm sending' (which is highlighted). Below 'Alarm sending' are links for 'HTTP event', 'Schedule', 'Alarm buffer', 'Motion detection', and 'System Log'. The main content area is titled 'Alarm sending' and has radio buttons for 'On' (selected) and 'Off'. Below this are 'File attachment' (radio buttons for 'On' and 'Off', with 'On' selected) and 'Image file name' (a text input field). There is a 'Suffix' section with radio buttons for 'None', 'Date Time', and 'Sequence number' (selected). A 'Sequence number clear' button with a 'Clear' label is next to it. The 'Alarm' section has two checked checkboxes: 'Motion detection' and 'Use alarm buffer', each with a corresponding button labeled 'Motion detection' and 'Alarm buffer' respectively. The 'Effective Period' section has radio buttons for 'Always' (selected) and 'Schedule'. At the bottom are 'OK' and 'Cancel' buttons.

Alarm sending : Select On to set to send mail with connection to the alarm detection.

File attachment : Set whether an image file is attached to the mail sent or not. When On is selected, the image file made by the settings below is attached. When Off is selected, only the message is sent.

Image file name : Type the file name you want to assign to the image to attach a mail. You can use up to 10 alphanumeric, - (hyphen) and _ (underscore) for naming.

Suffix : Select a suffix to add to the file name:

None: No suffix is added. The Image file name is assigned to the image to be sent via an e-Mail.

Date & time: The date & time suffix is added to the Image file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.

Sequence number: A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.

Motion Detection : Click it on for using Motion Detection function as a sensor. You can set the motion detection function page.

Note :

- Motion Detection works only when the Video mode is set to MPEG4 and the Cropping is set to Off.

Alarm Buffer : Select Use alarm buffer when you forward the image/ audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click Alarm buffer to display the Alarm buffer setting menu. For details, see "Setting

the Alarm Buffer — Alarm buffer setting Menu on page.

Periodical sending

You can set to send an image file by SMTP server periodically by selecting On to send the image file by SMTP server linked with setting period.

HOME

SETTING

BASIC

Advance

FTP client

SMTP

General

Alarm sending

Periodical sending

HTTP event

Schedule

Alarm buffer

Motion detection

System Log

Periodical sending ☒ On ☐ Off

Image file name

Suffix ☐ None ☐ Date Time ☒ Sequence number

Sequence number clear

Interval H M
(MIN : 30min. MAX : 24-hour interval)

Effective Period ☐ Always ☒ Schedule

Image file name : Type the file name of the image sent by SMTP up to 10 alphanumeric characters, - (hyphen) and _ (under score).

Suffix : Select a suffix to be added to the file name sent by SMTP.

None : The name of the sent file will be the Image file name.

Date & time : The date & time suffix is added to the Image file name. The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.

Sequence number : A consecutive number is added to the Image file name.

Sequence number clear : Click Clear and the suffix of the sequence number returns to 1.

Interval : Set the periodical sending is effective interval. Min value is 30 min and Max value is 24 hour.

Effective period : Set the period when the periodical sending is effective.

Always : The periodical sending is always effective.

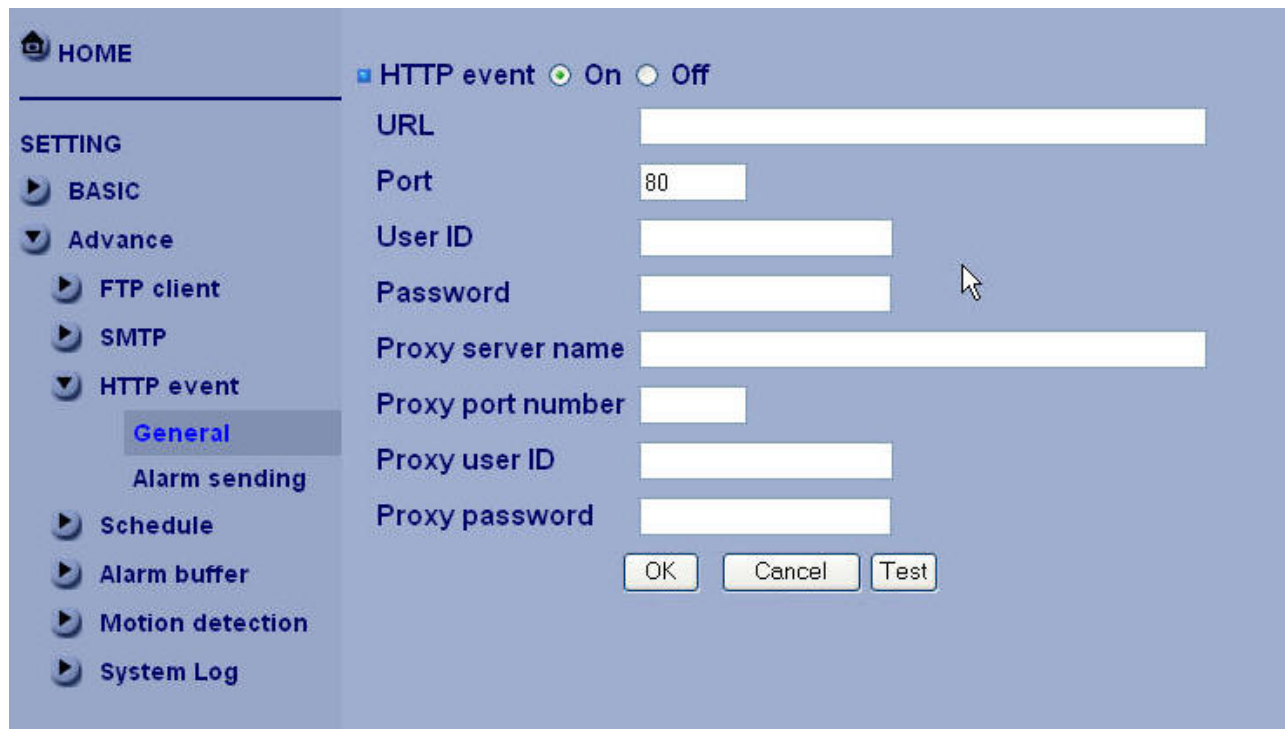
Schedule : You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click Schedule and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 34)

HTTP Event

Use this menu to set up for capturing and sending images to an HTTP server. By using HTTP client function, you can send the image and audio file which has been shot and recorded linked with the external

sensor input or with the built-in motion detection function to HTTP server. HTTP client setting menu is composed of two tabs, General and Alarm sending.

General



The screenshot shows a web interface for configuring HTTP event settings. On the left is a sidebar with a 'HOME' button and a 'SETTING' menu. The 'SETTING' menu includes 'BASIC', 'Advance', 'FTP client', 'SMTP', 'HTTP event', 'Schedule', 'Alarm buffer', 'Motion detection', and 'System Log'. The 'HTTP event' option is expanded, showing 'General' (selected) and 'Alarm sending'. The main content area is titled 'HTTP event' with radio buttons for 'On' (selected) and 'Off'. Below this are input fields for 'URL', 'Port' (set to 80), 'User ID', 'Password', 'Proxy server name', 'Proxy port number', 'Proxy user ID', and 'Proxy password'. At the bottom right are 'OK', 'Cancel', and 'Test' buttons.

HOME

SETTING

- BASIC
- Advance
 - FTP client
 - SMTP
 - HTTP event
 - General
 - Alarm sending
 - Schedule
 - Alarm buffer
 - Motion detection
 - System Log

HTTP event ☒ On ☐ Off

URL

Port

User ID

Password

Proxy server name

Proxy port number

Proxy user ID

Proxy password

OK Cancel Test

HTTP event: Set up the HTTP server URL, port, user id, password, and proxy server settings.

Alarm sending

Set to send the mail with connection to the alarm detection by the external sensor input or by the built-in motion detection function.

The screenshot shows a web interface for configuring alarm sending. On the left is a sidebar with a 'HOME' button and a 'SETTING' menu. Under 'SETTING', there are options for 'BASIC', 'Advance', 'FTP client', 'SMTP', 'HTTP event', 'General', 'Alarm sending' (which is highlighted), 'Schedule', 'Alarm buffer', 'Motion detection', and 'System Log'. The main area is titled 'Alarm sending' with radio buttons for 'On' (selected) and 'Off'. Below this, there are two sections: 'Alarm' and 'Effective Period'. The 'Alarm' section has a checked checkbox for 'Motion detection' with a 'Motion detection' button, and input fields for 'Parameter' and 'Message'. It also has a checked checkbox for 'Use alarm buffer' with an 'Alarm buffer' button, and input fields for 'Parameter' and 'Message'. The 'Effective Period' section has radio buttons for 'Always' and 'Schedule' (selected), with a 'Schedule' button. At the bottom are 'OK' and 'Cancel' buttons.

Alarm sending : Select On to set to send mail with connection to the alarm detection.

Motion Detection : Click it on for using Motion Detection function as a sensor. You can set the motion detection function page.

Note :

- Motion Detection works only when the Video mode is set to MPEG4 and the Cropping is set to Off.

Alarm Buffer : Select Use alarm buffer when you forward the image/ audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click Alarm buffer to display the Alarm buffer setting menu. For details, see “Setting the Alarm Buffer — Alarm buffer setting Menu on page.

Effective period : Set the period when the periodical sending is effective.

Always : The periodical sending is always effective.

Schedule : You can specify the period when the periodical sending is effective in the schedule setting in the other section. Click Schedule and the setting menu for the effective period is displayed.

Schedule

When you click Schedule on the Advanced mode menu, the Schedule setting menu appears. This is the same menu as the setting menu which is displayed when you click Schedule to set Effective period and Schedule in FTP client setting menu, e-Mail (SMTP) setting menu, Alarm out setting menu and so on.

Example: When setting e-Mail (SMTP) (the alarm sending) in the Schedule setting menu.

HOME

SETTING

- BASIC
- Advance
 - FTP client
 - SMTP
 - HTTP event
 - Schedule
 - Setting
 - Alarm buffer
 - Motion detection
 - System Log

Schedule selection FTP - Alarm

<input type="checkbox"/> Mon	Start time	00 : 00	- End time	24 : 00
<input type="checkbox"/> Tue	Start time	00 : 00	- End time	24 : 00
<input type="checkbox"/> Wed	Start time	00 : 00	- End time	24 : 00
<input type="checkbox"/> Thu	Start time	00 : 00	- End time	24 : 00
<input type="checkbox"/> Fri	Start time	00 : 00	- End time	24 : 00
<input type="checkbox"/> Sat	Start time	00 : 00	- End time	24 : 00
<input type="checkbox"/> Sun	Start time	00 : 00	- End time	24 : 00

☐ Use the same time schedule every day.

OK Cancel

Setting

Schedule selection

Select the list box to specify the schedule you want to set. e-Mail (SMTP) – Alarm, e-Mail (SMTP) – Periodical, FTP – Alarm, FTP – Periodical, HTTP event – Alarm, Alarm output – Alarm or Alarm output – Timer, can be selected.

Mon (Monday) to Sun (Sunday)

The time period on the right of the checked day is the effective period of the schedule.

Start time, End time

Specify the Start time and the End time.

Use the same time schedule every day

When this is checked, the Start time and End time set to Mon (Monday) are applied to all days. In this case, the Start time and End time of the other days than Mon (Monday) cannot be input.

Alarm Buffer

You can set the Pre-alarm image and audio (the image and audio before the alarm detection) and the Post - alarm image and audio. These can be set when Alarm sending FTP client setting menu or Image memory setting menu is set to On, and besides when Use alarm buffer is selected.

HOME

SETTING

BASIC

Advance

FTP client

SMTP

HTTP event

Schedule

Alarm buffer

Setting

Motion detection

System Log

Alarm buffer ☒ On ☐ Off

Video mode MPEG4

Recording capacity

Pre-alarm period 5 Sec.

Post-alarm period 5 Sec.

Recording time

Pre-alarm period 5 Sec.

Post-alarm period 5 Sec.

OK Cancel

Setting

Alarm buffer : To activate the Alarm buffer function, select On. The basic setting options are displayed below. When you do not use the Alarm output function, select Off.

Recording capacity

Pre-alarm period : Display the maximum recording capacity of image/audio before the alarm detection.

Post-alarm period : Display the maximum recording capacity of image/audio after the alarm detection.

Recording time

Set the recording time for the Pre-alarm image/audio and Post alarm image/audio.

Pre alarm period : Type it with recording time of the image/audio before the alarm detection.

Post alarm period : Type it with recording time of the image/audio after the alarm detection.

Note :

- The value of Recording capacity differs depending on Image size, Bitrate (for MPEG4) and Image quality (for MPEG4 and MJPEG) in the camera setting menu.

Motion Detection

When you click Motion Detection on the Advance mode menu, the Motion Detection setting menu appears. There are three Motion Detection functions as sensors to set for different detecting zones. Each one has Threshold and Sensitivity inputs which you can adjust to specific zone sequentially. Motion Detection function can support to FTP, SMTP and Alarm output for capturing and sending images or starting alarm output.



Click it On when you use the Motion Detection function and detecting zone appears for adjusting and moving. The common setting options are displayed below. If you do not wish to use the Motion Detection function, click it Off and press OK.

Motion Detection 1 : Click it on for using Motion Detection 1 function as a sensor. You can adjust and move the detecting zone by using mouse.

Motion Detection 2 : Click it on for using Motion Detection 2 function as a sensor. You can adjust and move the detecting zone by using mouse.

Motion Detection 3 : Click it on for using Motion Detection 3 function as a sensor. You can adjust and move the detecting zone by using mouse.

Threshold : You can use the tool bar to set up-limit value. When detecting zone signals are over setting value, it would carry on assigned work.

Sensitivity : You can use the tool bar to set down-limit value. When detecting zone signals are over setting value, it would carry on assigned work.

Carry out the following steps :

Click On to Motion Detection 1 choose one of eight orders.

A detecting zone 1 appears and use mouse to adjust and move the zone boundaries and position.

Use tool bar to set Threshold and Sensitivity value.

Follow the steps to set the other Motion Detection.

Click the OK to save the setting.

Note :

- Be careful! Motion Detection function don't work with Patrol function at same time.

System Log

The System Log function allows users to review any changes and events happened. The system starts logging automatically after started.

Remote Log: Enables user to send the log data to a specified log server.

Remote Log

☒ Enable remote log

Server name

Server Port ☒ 514 ☐ (1024 ~ 65535)

Current Log

```
Jan 1 00:00:10 <info> > SYS: log started
Feb 13 10:54:32 <info> > NET: Starting network...
Feb 13 10:54:32 <info> > NET: MAC = 00:11:68:73:06:39
Feb 13 10:54:32 <info> > NET: Network type = DHCP
Feb 13 10:54:33 <info> > ALARM: Alarm Buffer Event Receive
Feb 13 10:54:33 <info> > WDT: watchdog start
Feb 13 10:59:45 <info> > RTSP: TCP from 192.168.50.157
Feb 13 11:16:11 <info> > RTSP: TCP from 192.168.50.142
Feb 13 11:18:50 <info> > RTSP: Close from 192.168.50.142
Feb 13 11:19:02 <info> > RTSP: TCP from 192.168.50.142
Feb 13 11:19:40 <info> > RTSP: Close from 192.168.50.142
Feb 13 11:21:12 <info> > RTSP: TCP from 192.168.50.142
Feb 13 11:21:28 <info> > RTSP: Close from 192.168.50.142
Feb 13 11:21:53 <info> > RTSP: TCP from 192.168.50.142
Feb 13 11:22:10 <info> > RTSP: Close from 192.168.50.142
Feb 13 11:23:26 <info> > RTSP: Close from 192.168.50.157
Feb 13 11:23:26 <info> > Video: MPEG4 - Close Connection from 192.168.50.157
Feb 13 11:23:32 <info> > Video: MPEG4 - New Connection from 192.168.50.157
Feb 13 11:30:53 <info> > Video: MPEG4 - New Connection from 192.168.50.142
Feb 13 11:31:20 <info> > Video: MPEG4 - Close Connection from 192.168.50.142
```


Trouble shooting sheet

After powering up or inserting LAN cable connected to a PoE switch, the Network Camera performs a self-diagnostic to detect any hardware defects.




Reset Button

Reset and Restore

At the rear side of the camera there is a button hidden in the pinhole as shown in the picture. It is used to reset the system or restore the factory default settings.

Sometimes resetting the system sets the system back to normal state. If the system problems remain after reset, restore the factory settings and install again.

 Restoring the factory defaults will erase any previous settings. Reset or restore the system after power on.

Troubles	Probable Reasons	Solutions
No action while power on. No image. The Networking indicator isn't flashing.	Power cable is not in well connection.	Reconnected.
	Firmware is hang up.	Start up with factory default setting by pressing the reset button over 5 seconds then releasing it.
Having image but can't control. The indicator isn't flashing.	Firmware is hang up.	Restart the Network camera by pressing and releasing the reset button.
Unstable images	Poor video cable connection	Reinsert
	Power W is not enough	Change
Vague images	The focus is out of focus.	Adjust the lens or focus manually.
	Incorrect camera setting	Check the dip switch.

Technical Parameters

Model	FCS-1081 / FCS-1081A
Compression Mode	MJEG/MPEG4
Max. Resolution	704x480 pixels(NTSC) 704x576 pixels(PAL)
Frame Rate	160x120: 30/25fps 320x240: 30/25fps 704x480: 30/25fps
Sensor	1/3" ColourCCD
Lens	4.0mm/F1.2
Minimum Illumination	0.05Lux/F1.2
Shutter (sec)	1/60~1/100,000(NTSC) 1/50~1/110,000(PAL)
Audio Codec	G.711 PCM 64 kbit/s, ADPCM 32 kbit/s, MP3, MPEG4-AAC full duplex(FCS-1081A only)
Flash ROM	8MB
SDRAM	32MB
Zoom	Digital: 10x
Power Supply	DC 12V , ± 5%
Temperatures	0°C ~ + 50°C
Humidity	≤ 95% non-condensing

Streaming Video/Audio Solution

Streaming video is a sequence of "moving images" that are sent in compressed form over the Internet and displayed by the viewer as they arrive. With streaming, a Web user does not have to wait to download a large file before seeing the video or hearing the sound. Instead, the media is sent in a continuous stream and is played as it arrives.

- Snapshot JPEG image

<http://servername/cgi-bin/jpg/image>

<http://servername/jpg/image.jpg>

- Snapshot JPEG image through mobile phone

<http://servername/mobile.wml>

<http://servername/mobile.htm>

- Stream MJPEG video stream

<http://servername:8070/video.mjpg>

- Stream MPEG4 video stream

<http://servername:8090/video.mp4>

- Stream RTSP stream

<rtsp://servername:554/video.mp4>

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