



LevelOne

User Manual

FCS-1121

**Megapixel PoE
Network Camera**

Ver 1.0

Product name:	Megapixel Box Network Camera (FCS-1121)	
Release Date:	2010/02/01	
Manual Revision:	V1.x	Firmware 1.x.x.x
Web site:	www.level1.com	

Default Settings

IP Address	DHCP
Username	admin
Password	admin

General Public License

This product incorporates open source code into the software and therefore falls under the guidelines governed by the General Public License (GPL) agreement.

Adhering to the GPL requirements, the open source code and open source license for the source code are available for free download at <http://global.level1.com>.

If you would like a copy of the GPL or other open source code in this software on a physical CD medium, LevelOne (Digital Data Communications) offers to mail this CD to you upon request, for a price of US\$9.99 plus the cost of shipping.

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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.

Package Contents

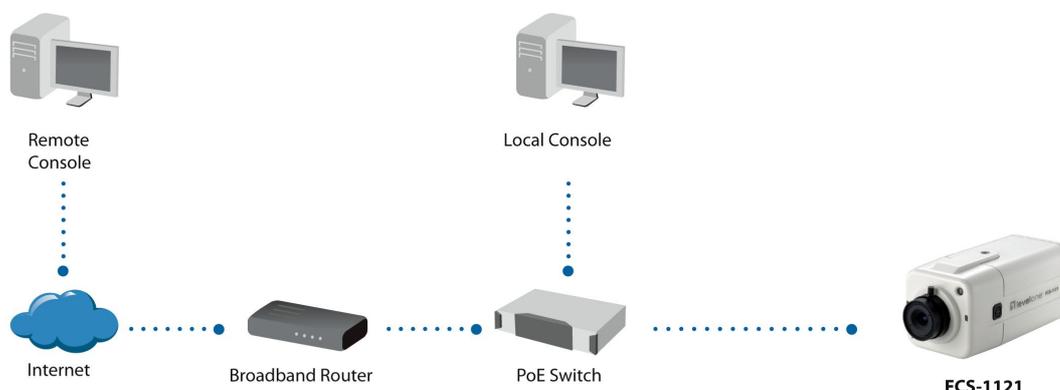
- Camera
- CS mount Lens
- CD Manual/utility
- QIG
- Camera Stand
- Power Adapter

Fixed Box Network Camera Overview

The LevelOne FCS-1121 IP camera offers reliable and excellent video quality solution for 24-hour surveillance application. Users can view live, motion image from anywhere by web browser or mobile phone via Internet or 3G network respectively. With the mega pixel progressive sensor and built-in removable IR-cut Filter, it delivers the extremely clear and detailed images that CCTV cameras cannot provide.

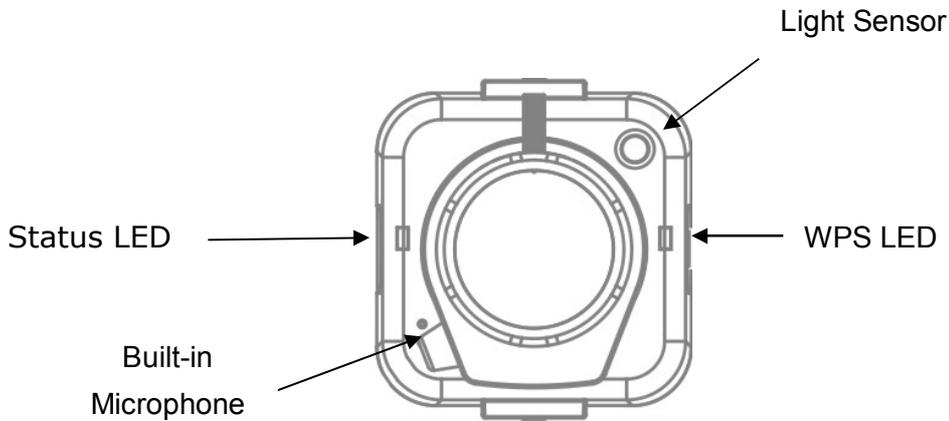
Other than motion detection function, the FCS-1121 can also support intelligence surveillance such as object tracking, people counting, and semantic region alarm and so on. In addition, the LevelOne IP camera can transmit the video to portable devices via other technology, for instance, WiMAX, 3G cell phone, NAS, Digital Frame and power line.

For easy setup, “Easy Installation Wizard” makes the configuration simple even for users without IT background. The LevelOne IP camera simplifies the hardware and software installation by flexible design and multiple applications. In other words, the FCS-1121 is not only for normal home security but also suitable for professional surveillance demand such as bank, office building, and factory applications.

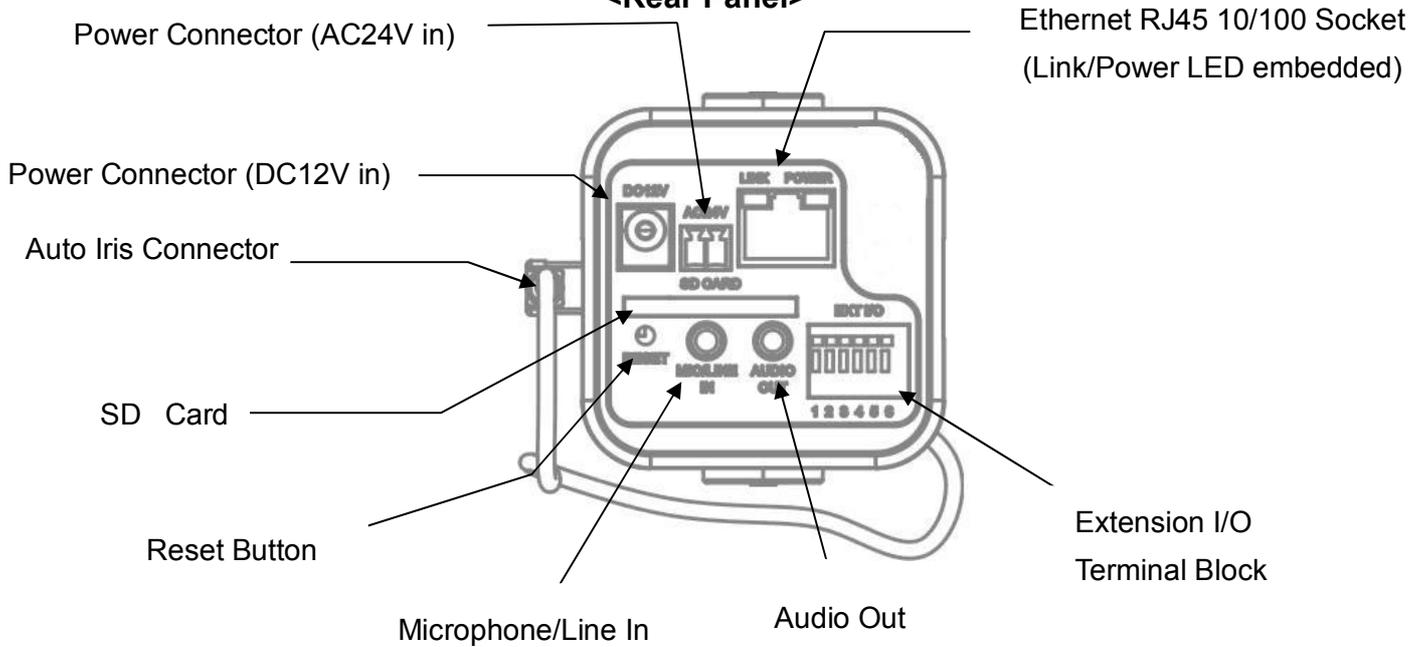


Device Appearance Description

<Front Panel>



<Rear Panel>

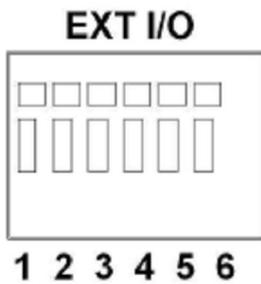


LED Behavior

Function	LED Behavior	Description	Remark
Status		Hardware failure	Front Left (Green)
Status	Steady On	<ol style="list-style-type: none"> Restoring settings Normal Operation 	Front Left (Green)
Status	Unlighted	<ol style="list-style-type: none"> Power Off Power On till System setup 	The LED can be configured to be unlighted during normal operation
Status		While F/W upgrading	Front Left (Green)
Link	Blinking	Blinking while network connection in progress	Rear Left (Orange)
Link	Unlighted	No connection	Rear Left (Orange)
Power	Steady On	Normal Operation	Rear Right (Green)
Power	Unlighted	Power off	Rear Right (Green)

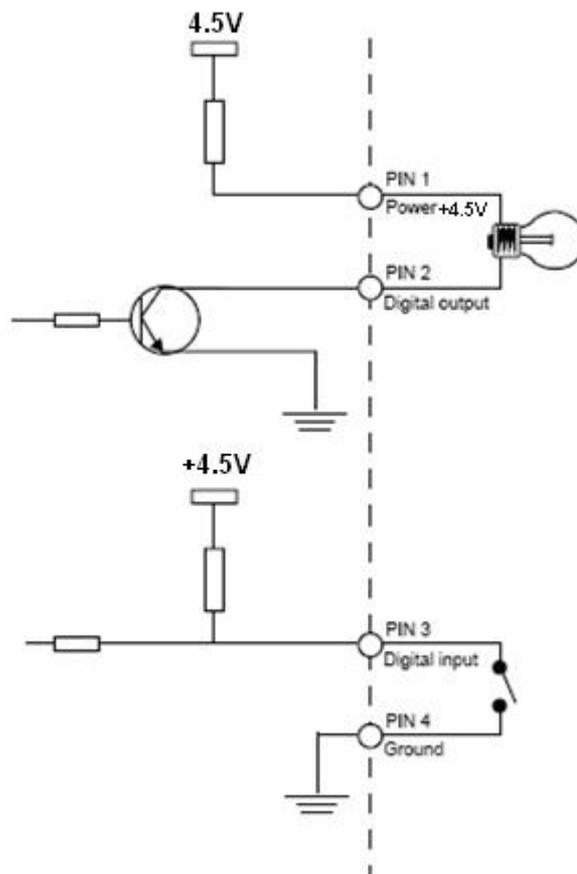
Extension I/O Terminal Block

The Network Camera provides an extension I/O terminal block which is used to connect external input/output devices. The pin definitions are listed as below.

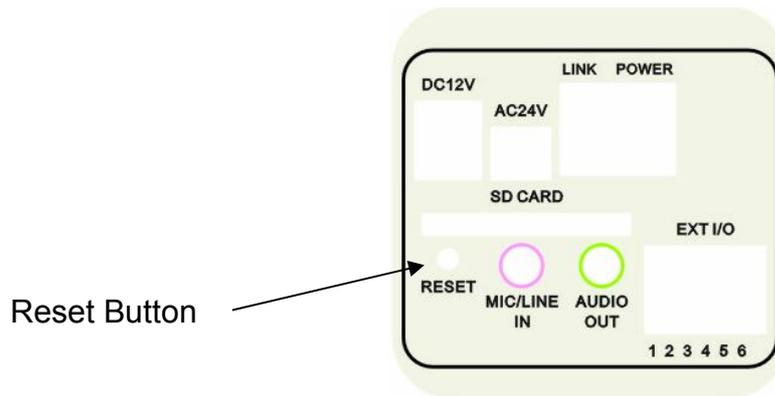


Pin	Function
1	Power +4.5V
2	Digital Output
3	Digital Input
4	Ground
5	RS-485 -
6	RS-485 +

DI/DO Diagram



Hardware Reset



The reset button is used to reset the system or restore the factory default settings. Sometimes resetting the system can return the camera to normal operation. If the problems remain after reset, please restore the factory settings and install it again.

Reboot: Please press and release the indented reset button within 1 second with paper clip or thin object. Wait for the network camera to reboot.

Restore: Please press and hold the reset button until the status of LED turns off. It takes about 10 seconds. Please note that all settings will be restored to factory default. Upon successful restore, the status of LED will be blue again during normal operation.

SD Card Capacity

The network camera is compliant with SD/SDHC (Maximum 32GB) cards.

Installation

System Requirements

Operating System:

Microsoft Windows XP Home Edition SP2

Microsoft Windows XP Professional SP2

Computer:

IBM PC/AT Compatible

CPU:

Pentium 3GHz or faster

Memory:

1024 MB or more

Monitor:

1024 x 768 pixels or more, 24-bit True color or better

Network Interface:

10/100Mbps Network interface card must be installed

Web Browser:

Microsoft Internet Explorer 6.0 SP2

CD-ROM Drive:

It is necessary to read the operating instructions in the provided CD-ROM.

Adobe Reader:

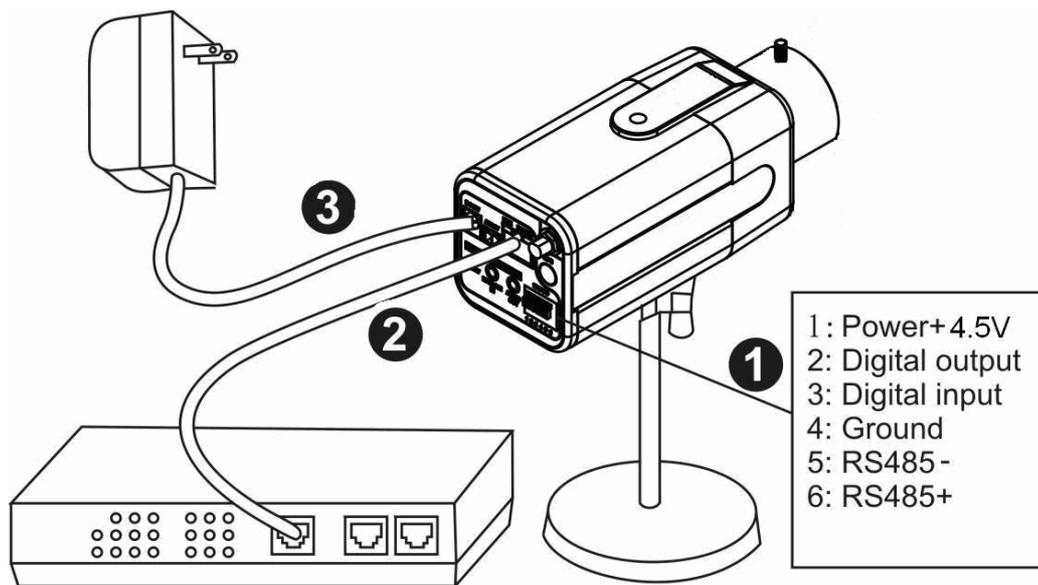
It is necessary to read the operating instructions in the provided CD-ROM.

- Audio function will not be working if a sound card is uninstalled on PC. Audio may be interrupted depending on the network environment.

Camera Connection

Basic Connection (Without PoE)

- 1.1 If you have external devices such as sensors and alarms, please make connections with extension I/O terminal block.
- 1.2 Connect the camera to a switch via Ethernet cable.
- 1.3 Connect the supplied power cable from the camera to the power outlet.



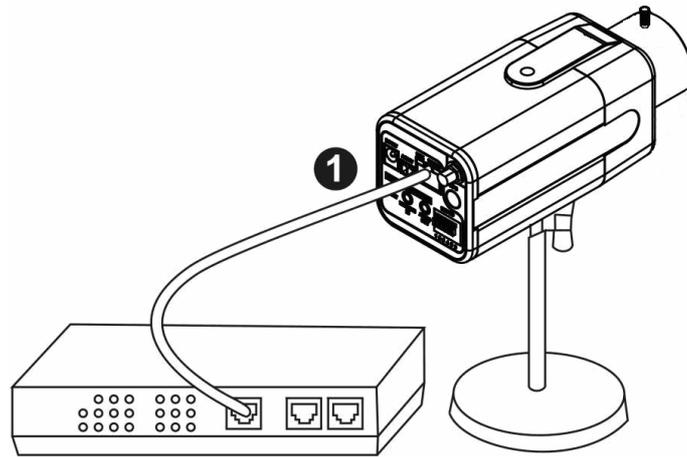
Please check your product package contains all the accessories listed in the foregoing Package Contents. Depending on the user's application, an Ethernet cable may be needed. The Ethernet cable should meet the specs of UTP Category 5 and not exceed 100 meters in length.

Upon powering up, the power LED will become lighted first and then the device will go through booting process. The link LED will be steady amber for getting IP address. After getting IP Address, the link LED will blink orange while network connection is processing.

Power over Ethernet (PoE) Connection

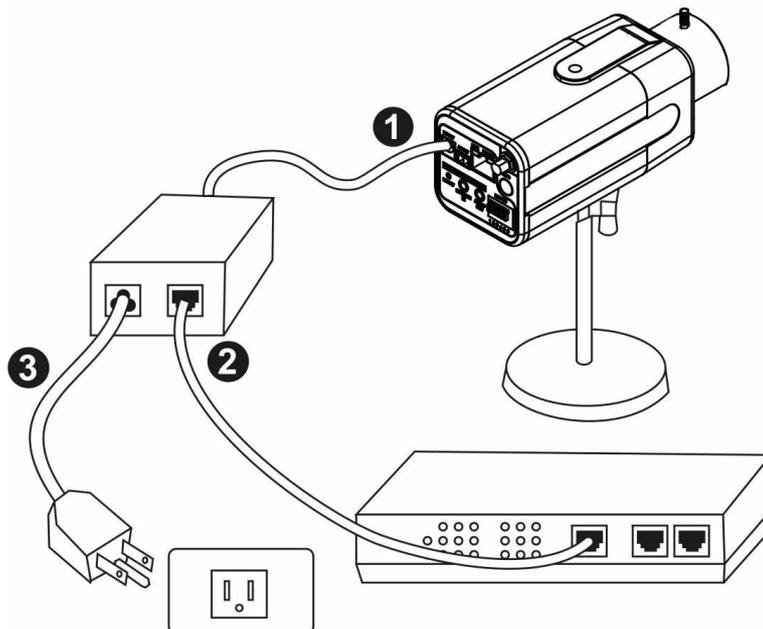
1.1. When connecting to PoE-enabled switch

The camera is PoE compliant and please connects the camera to a PoE-enabled switch via single Ethernet cable.



1.2. When connecting to a non-PoE switch

Please connect the camera to a non-PoE switch via PoE Injector (optional).

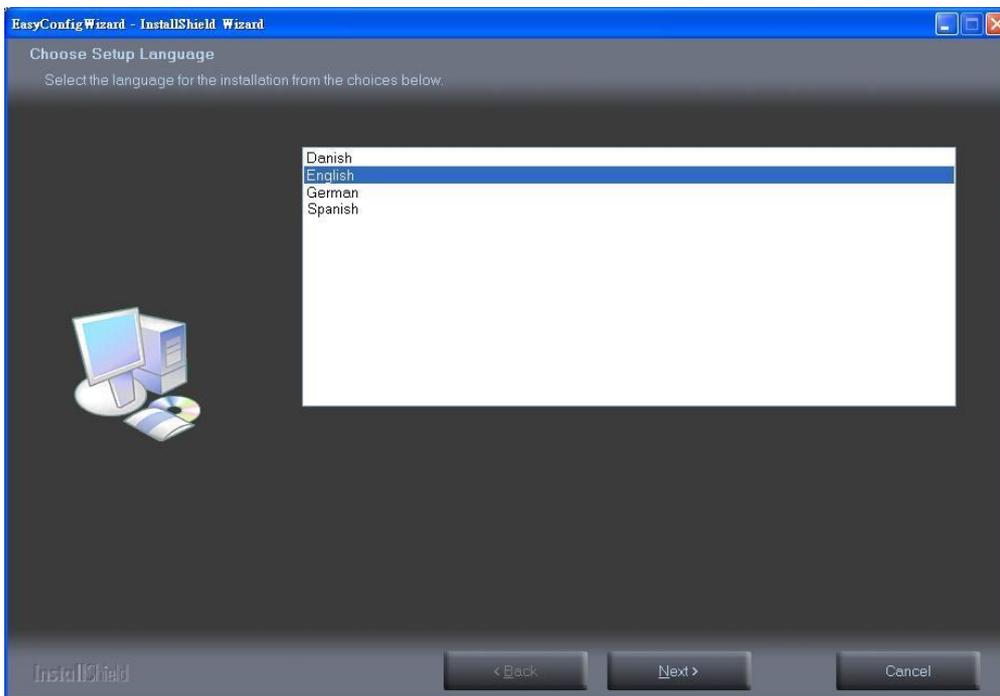


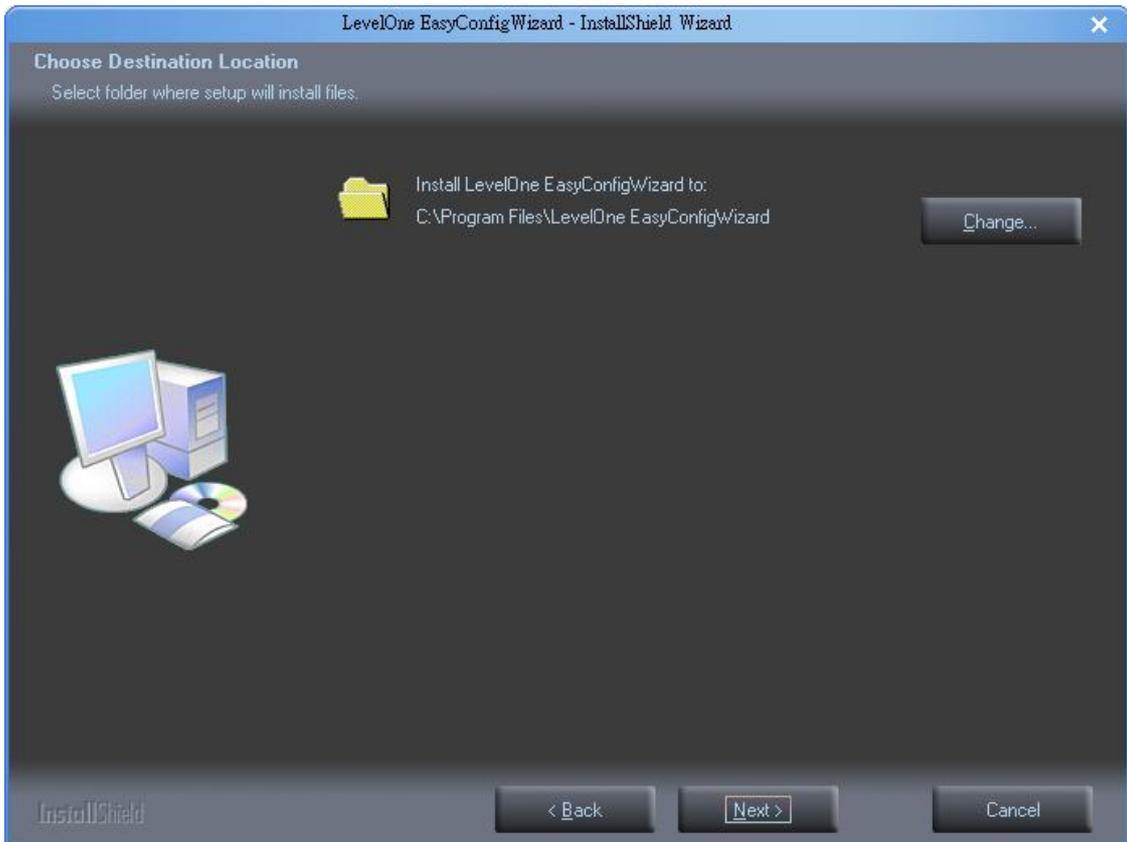
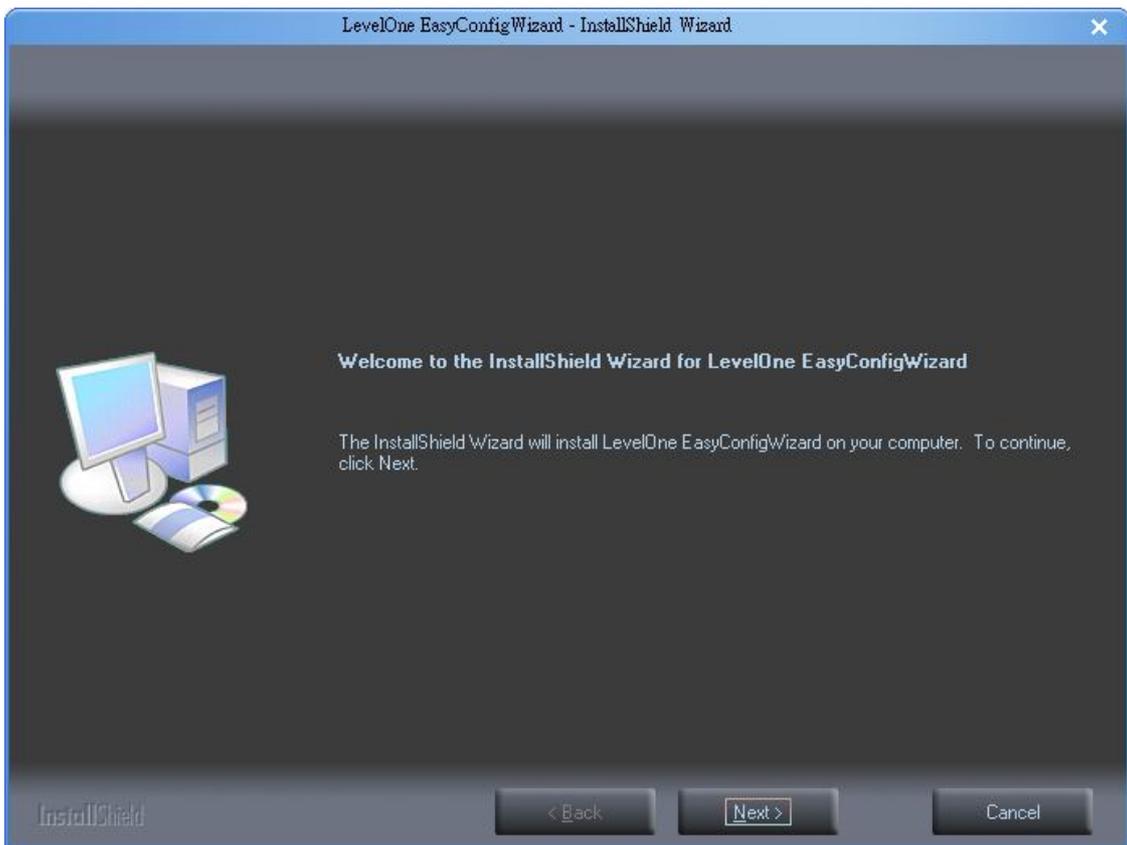
Software installation

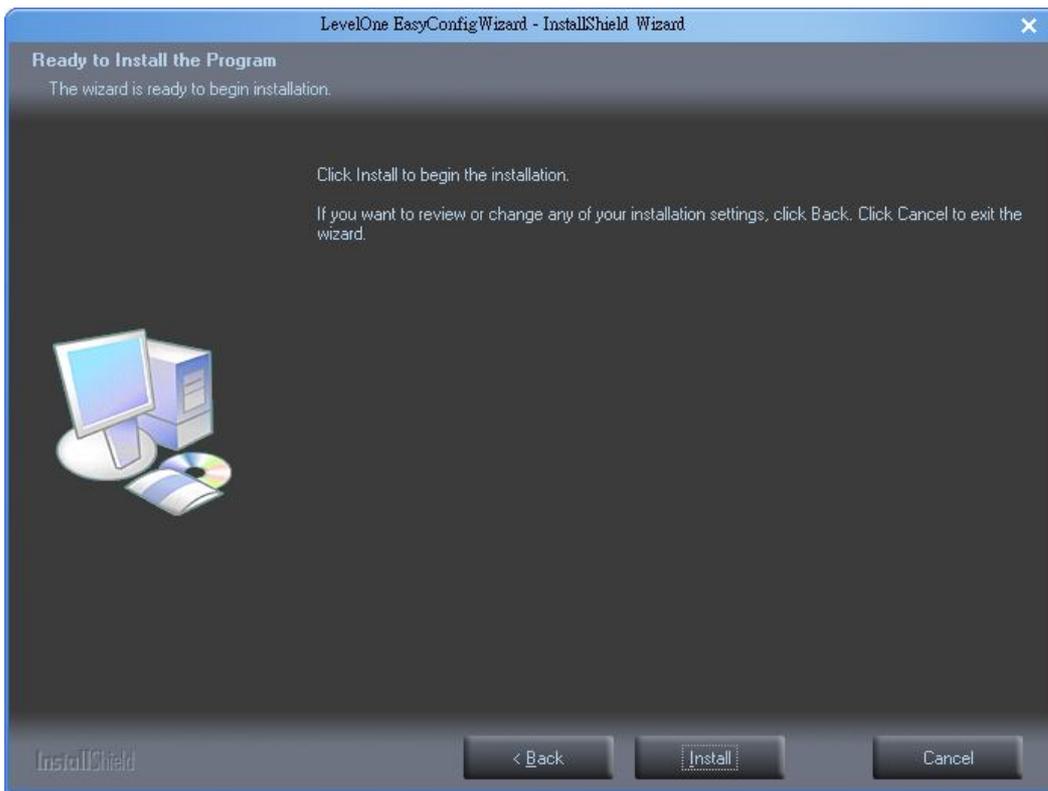
In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the Network Camera and grant user access to the camera.

After hardware connection checking, the users can run the Installation Wizard program included in the product CDROM to automatically search for the Network Camera in the Intranet. There may be many Network Cameras in the local network. Users can differentiate the Network Cameras with the serial number. The serial number is printed on the labels on the carton and the bottom of the Network Camera body.

1. Insert the Installation CD into the CD-ROM driver. Click install and shows the welcome screen. Follow the steps to install the Installation wizard on user's computer.









4. Setting the Network Camera IP address

User can either select simple mode or professional mode for network camera IP setting. If simple mode is selected, the easy configuration program will set up the connection automatically. If professional mode is selected, the user will need to configure the IP manually. The DHCP setting is recommended. If user wants to set IP address manually, please refer to the product user manual.





Select the IP address settings.

- Automatically obtain an IP Address (DHCP)
- Set IP Address configuration manually



v1.2

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Enter the Static IP Address to configure IP Camera.

IP Address

Subnet Mask

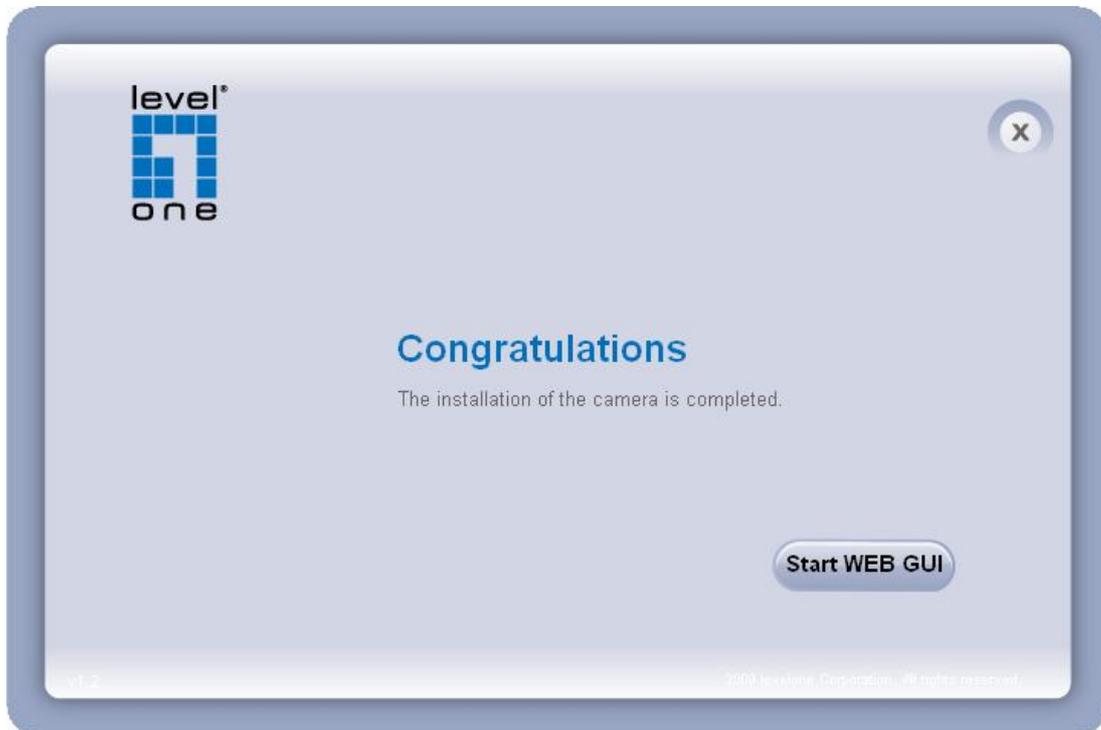
Gateway

DNS1

DNS2



5. After finish setting, the connection successful or fail showed. If connection failed, user can either try again or quit the installation. User can either select "Start Web GUI" to continue or click "X" on the top right of the screen to finish the installation.



Once installation is completed, the Administrator should proceed to the next section "Access to the Network Camera" for necessary checks and configurations.

Access to the Network Camera

Check Network Settings

The Network Camera can be connected either before or immediately after software installation onto the Local Area Network. The Administrator should complete the network settings on the configuration page, including the correct subnet mask and IP address of gateway and DNS. Ask your network administrator or Internet service provider for the detail information.

Add Password to prevent Unauthorized Access

The Administrator should immediately implement a new password as a matter of prudent security practice. The user name and password for the Administrator are assigned as “**admin/password**”. Once the Administrator’s password is saved, the Network Camera will ask for the user’s name and password before each access. The Administrator can set up a maximum of ten (10) user accounts. Each user can access the Network Camera except to perform system configuration. Once the password is changed, the browser will display an authentication window to ask for the new password. **Once the password is set, there is no provision to recover the Administrator’s password. The only option is to restore to the original factory default settings.**

Authentication

After opening the Web browser and typing in the URL of the Network Camera, a dialogue window pops up to request a username and password. The user name and password for the Administrator are assigned as “**admin/admin**”. Upon successful authentication, the following figure is displayed.

The foreground is the login window and the background shows the message if authentication fails. The user may check the option box to save the password for future convenience. This option is not available to the Administrator for obvious reason.



401 Unauthorized

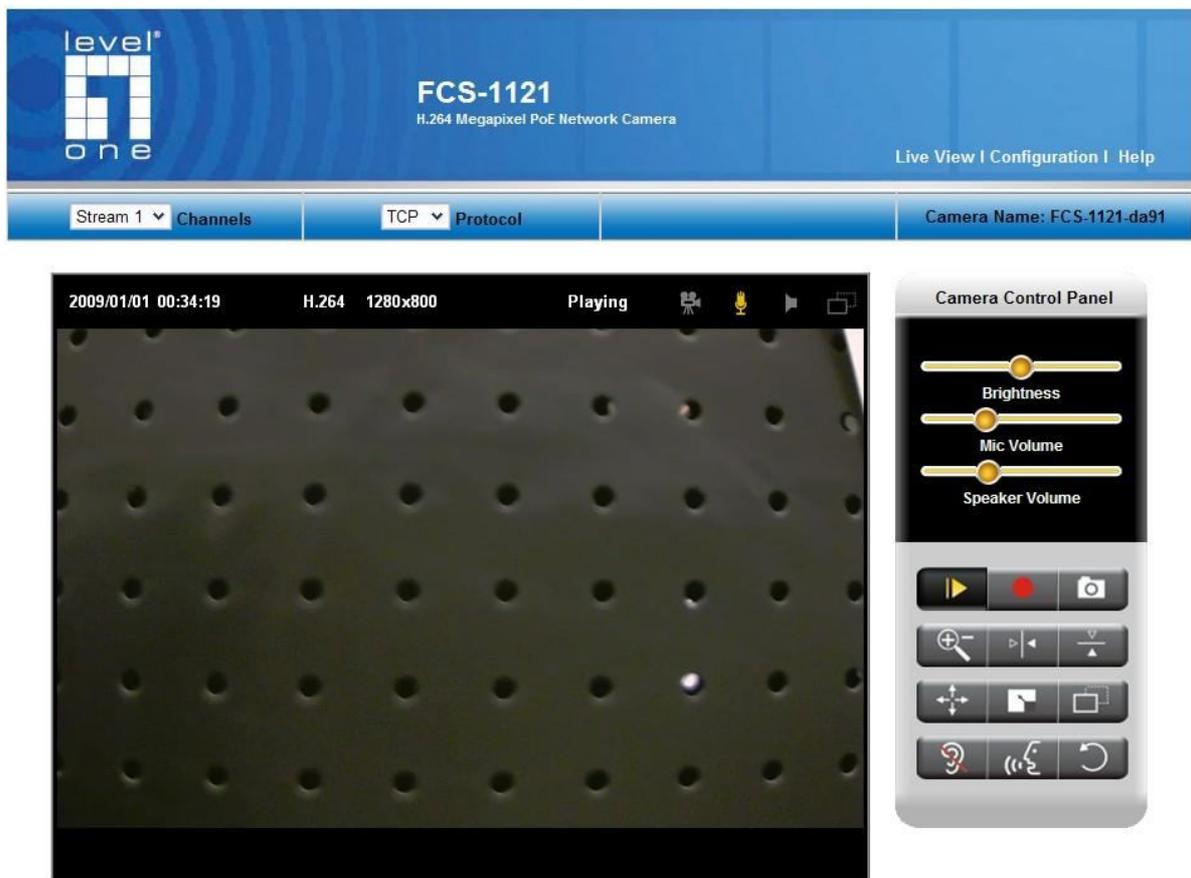
Authorization required.

Installing plug-in

For the initial access to the Network Camera in Windows, the web browser may prompt for permission to install a new plug-in for the Network Camera on the Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any installation and execution attempt. This plug-in has been registered for certificate and is used to display the video in the browser. Users may click on  to proceed. If the web browser does not allow the user to continue to install, check the Internet security option and lower the security levels or contact your IT or networking supervisor for help.



Live View



Live View is the default page that opens when accessing the Network Camera. Live video is displayed directly in the browser window.

- **Stream1/Stream2 Channels**

The network camera offers simultaneous dual stream for optimized quality and bandwidth. To configure the codec compression and video resolution, please go to the Configuration->Camera/video/audio->Video to make the changes, or refer to the Video configuration on page 21.

- **TCP/UDP protocol**

TCP: This protocol guarantees the complete delivery of streaming data and thus provides better video quality. Nevertheless, the downside with this protocol is that its real-time

effect is not as good as that of the UDP protocol.

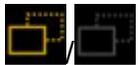
UDP: This protocol allows for more real-time audio and video streams. However, network packets may be lost due to network burst traffic and images may be broken. Activate UDP connection when occasions require time-sensitive responses and the video quality is less important.



Recording on/off: shows the status of recording video



MIC on /off: shows the status of MIC volume.



MD on/off: shows the status of Motion Detection

- **Control Panel:** There are two slider bars and nine control buttons on the remote controller. They are describe as below:
- **Brightness and Mic volume adjustment:** Drag the slider bar to adjust the image brightness level and Mic volume. Click “Default” for default brightness setting and “Mute” for no sound. For more Audio setting, please refer to the Audio configuration on page 22.



Play or Stop: Click this button to play or stop the video.



Recording: Click this button to record video to your computer.



Snapshot: Click this button to capture and save still images.



Digital Zoom: Click this button to enable the zoom operation.



Mirror: horizontally reflect the display of the live video.



Flip: vertically reflect the display of the live video.



Real Size: click this button to view the object in real size. Press this button again to switch back to normal mode.



Full Screen: Click this button to switch to full screen mode. Press “Esc” key to switch back to normal mode.



Motion Detection Alert: Click this button to enable motion detection alert function.



NOTE: The <Video Control Panel> function has no effect on the recorded video. Whatever changes made to the <Video Control Panel> **will not** be applied to the recorded video.

Configuration

Camera/Video/Audio

Camera:

The screenshot displays the configuration interface for the Level One FCS-1121 camera. The top header includes the Level One logo, the model name 'FCS-1121', and the description 'H.264 Megapixel PoE Network Camera'. A navigation bar at the top right contains links for 'Live View', 'Configuration', and 'Help'. The left sidebar provides a menu for various settings categories: Camera/Video/Audio, Network, Event, System, and Maintenance. The main 'Camera Setting' panel is active, showing a live video feed of a grid of circular patterns. To the right of the video feed are several control panels: 'Brightness', 'Contrast', 'Sharpness', and 'Saturation' (each with a slider); 'Exposure Control' (with radio buttons for Sport, Normal, Night Vision, AE Lock, and User Defined); 'Auto Iris' (with an 'Enable' checkbox); 'Mirror and Flip' (with 'Mirror' and 'Flip' checkboxes); 'Flicker Free' (with radio buttons for 50Hz and 60Hz); 'True Day & Night' (with radio buttons for Auto and Manual); and 'Night Mode Effect' (with radio buttons for Color and Black & white). At the bottom right, there are buttons for 'Test in FullScreen', 'Apply', and 'Reset'.

Camera Setting

Brightness: Drag the slider bar to adjust the image brightness level, which ranges from -5 to +5.

Contrast: Drag the slider bar to adjust the image contrast level, which ranges from -5 to +5.

Sharpness: Drag the slider bar to adjust the image sharpness level, which ranges from -5 to +5.

Saturation: Drag the slider bar to adjust the image saturation level, which ranges from -5 to +5.

Night Vision

IR CUT: the Network Camera switches off the IR cut filter at all times for the sensor to accept the infrared light, thus helps improve low light sensitivity.

Auto: The Network Camera automatically removes the filter by judging the level of ambient light.

Environment: User can look for a place that best suits your needs, either outdoor or indoor.

Flicker-Free: While flicker-free technology eliminates the problem of flicker, it can cause slight judder on fast moving images or blurring problems; fast scrolling text for example may blur.

Exposure Mode

Manual: The camera fixes the exposure time and performs auto exposure settings.

Auto: The camera sets the exposure by auto exposure time. Auto exposure setting including the long exposure mode is performed according to the lighting conditions.

Click **Apply** or **Reset** to take effect.

.

Video

You can set up two separate streams for the Network Camera for different viewing devices.

Video Configuration

Stream 1	
Enabled	<input checked="" type="checkbox"/>
Video Codec	H.264
Video Resolution	1280x800(WXGA)
Frame Rate	30 fps
<input type="radio"/> Quality <input checked="" type="radio"/> Bitrate	12000Kbps
Quick setting

Stream 2	
Enabled	<input checked="" type="checkbox"/>
Video Codec	MJPEG
Video Resolution	1280x800(WXGA)
Frame Rate	20 fps
<input checked="" type="radio"/> Quality <input type="radio"/> Bitrate	Standard
HTTP Transport	<input type="checkbox"/>
Quick setting

Stream 1 & Stream 2

Video Codec: The Network Camera offers three choices of video codec standards for real-time viewing: H.264, MPEG-4 and MJPEG.

Video Resolution: select from the drop down list to choose the best resolution that fit your need.

Frame Rate: Select from the drop down list of the frame rate, which ranges from 2 to 30 fps when H.264 or MJPEG is selected. Only 3 to 15 fps can be chosen when MPEG-4 is selected. Set the frame rate higher for a smoother video quality.

Video quality and bit rate: User can either choose “quality” or “bitrate” to control the video quality with video codec at H.264 or MPEG4. Only “quality” can be chosen when video codec at MJPEG is selected. Set the bitrate higher for a better video quality. However, high bitrate may cost high network bandwidth resources.

The video qualities are selectable at the following settings: SoSo, OK, Not Bad, Medium Standard, and Good.

Video Configuration

The screenshot shows the 'Video Overlay' tab in a configuration window. It features two main sections: 'Timestamp' and 'Text'. Each section has an 'Enabled' checkbox (currently unchecked) and a 'Position' dropdown menu (set to 'Left-Top'). The 'Text' section also includes a text input field. Below these sections, a note states 'The video overlay only takes effect in stream 1'. At the bottom, there are 'Apply' and 'Reset' buttons.

Video Overlay: Check to enable the timestamp function and select display position from the drop-down list if user wants date and time to be shown on the screen of the live video. User may also enable and enter the video description in text box; and select display position from the drop-down list if user wants to make a note about the network camera. Click **Apply** or **Reset** to take effect.



NOTE: The video overlay only takes effect in stream 1.

Video Configuration

The screenshot shows the 'Save File Folder' tab in a configuration window. It features two main sections: 'Recording Folder' and 'Snapshot Folder'. Each section has a 'Path' text input field (containing 'C:\My Documents\IPCam') and a 'Browse' button. Below these sections, there are 'Apply' and 'Reset' buttons.

Save file folder

Recording folder path: The destination for saving the recording video files. Click browse to specify the saving path.

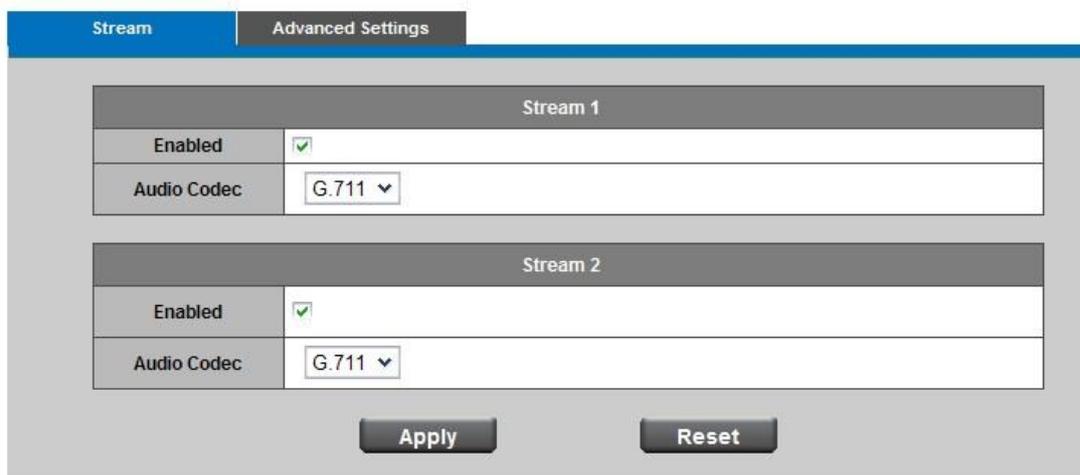
Snapshot folder path: The destination for saving the snapshot files. Click browse to specify the saving path.

Click **Apply** or **Reset** to take effect.

Audio

You can set up two separate streams for the Network Camera for different viewing devices. User can either enable or disable the audio function. If audio enable is selected, select the Audio codec from the drop down list.

Audio Configuration



The screenshot shows a web interface for audio configuration. At the top, there are two tabs: 'Stream' (highlighted in blue) and 'Advanced Settings'. Below the tabs, there are two sections for 'Stream 1' and 'Stream 2'. Each section contains two rows: 'Enabled' with a checked checkbox and 'Audio Codec' with a dropdown menu set to 'G.711'. At the bottom of the interface, there are two buttons: 'Apply' and 'Reset'.

Stream 1	
Enabled	<input checked="" type="checkbox"/>
Audio Codec	G.711 ▼

Stream 2	
Enabled	<input checked="" type="checkbox"/>
Audio Codec	G.711 ▼

Click **Apply** or **Reset** to take effect.

Multicast

Multicast addressing is a network technology for the delivery of information to a group of destinations simultaneously using the most efficient strategy to deliver the messages over each link of the network only once, creating copies only when the links to the multiple destinations split. You can either enable or disable the stream1 or stream 2 for the Network Camera. The default value for multicast address and port are 234.1.2.3 and 10000. Use different port number for different stream. Use default value is recommended if you are not sure how to setting.

Multicast

Multicast

Stream 1				
Enabled	<input type="checkbox"/>			
Multicast Address	<input type="text" value="234"/>	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>
Port	<input type="text" value="10000"/>			

Stream 2				
Enabled	<input type="checkbox"/>			
Multicast Address	<input type="text" value="234"/>	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>
Port	<input type="text" value="10004"/>			

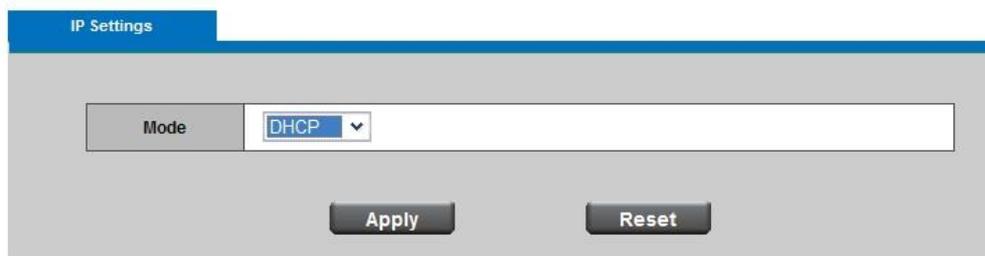
Click **Apply** or **Reset** to take effect.

Network

IP Setting

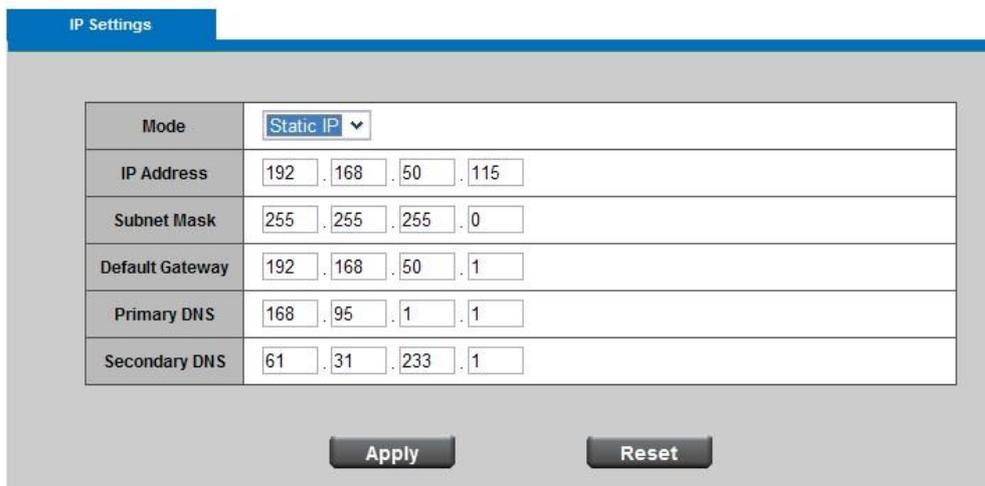
IP Setting: This section explains how to configure wired network connection for the Network Camera. There are several ways to setup the Network Camera over the Internet. The first way is to obtain an available dynamic IP address assigned by a DHCP server. The second way is to utilize a static IP. The third way is to use PPPoE.

IP Settings



The screenshot shows the 'IP Settings' configuration page. At the top, there is a blue header with the text 'IP Settings'. Below the header, there is a form with a 'Mode' dropdown menu set to 'DHCP'. At the bottom of the form, there are two buttons: 'Apply' and 'Reset'.

IP Settings

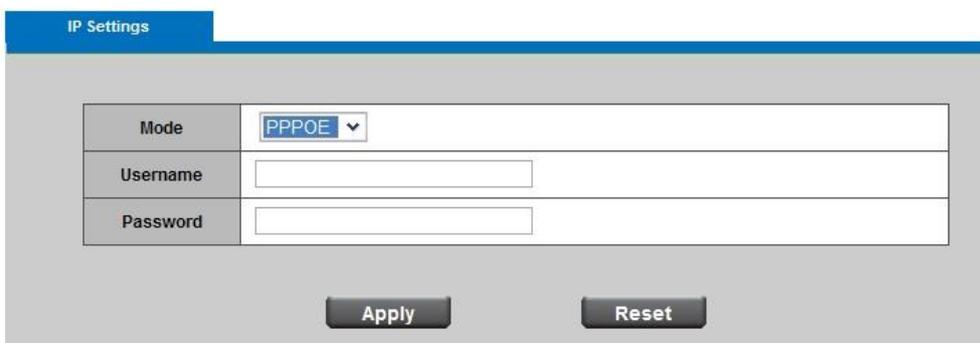


The screenshot shows the 'IP Settings' configuration page with 'Mode' set to 'Static IP'. The form contains several fields for network configuration:

Mode	Static IP
IP Address	192 . 168 . 50 . 115
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 50 . 1
Primary DNS	168 . 95 . 1 . 1
Secondary DNS	61 . 31 . 233 . 1

At the bottom of the form, there are two buttons: 'Apply' and 'Reset'.

IP Settings



The screenshot shows the 'IP Settings' configuration page with 'Mode' set to 'PPPOE'. The form contains fields for 'Username' and 'Password'. At the bottom of the form, there are two buttons: 'Apply' and 'Reset'.

DHCP: Get IP address automatically. Select this option to obtain an available dynamic IP address assigned by a DHCP server each time the camera is connected

to the LAN.

Static IP: Select this option to manually assign a static IP address to the Network Camera. Enter the static IP address, Subnet mask, Default Gateway, Primary and Secondary DNS provided by your ISP.

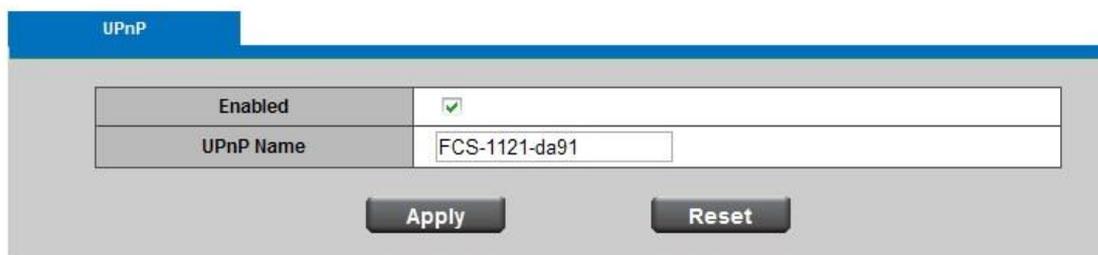
PPPoE (Point-to-point over Ethernet): Choose this connection type if you are connected to the Internet via a DSL Line. Note that to utilize this feature, it requires an account provided by your ISP. Enter the user name and password provided by your ISP.

Click **Apply** or **Reset** to take effect.

UPnP

Only UPnP discovery supported. Enable this function to allow the user to search for devices of interest on the network. Enter the UPnP name as you wish to show on the intranet.

UPnP



UPnP	
Enabled	<input checked="" type="checkbox"/>
UPnP Name	<input type="text" value="FCS-1121-da91"/>

Click **Apply** or **Reset** to take effect.

DDNS (dynamic domain name service)

DynDNS: Enable the DDNS service allows your Network Camera, especially when assigned with a dynamic IP address, to have a fixed host and domain name. Note that before utilizing this function; please apply a dynamic domain account first. Enter the username, password and hostname when enabled the DDNS.

DDNS

DynDNS	TZO
Enabled	<input type="checkbox"/>
Username	<input type="text"/>
Password	<input type="text"/>
Hostname	<input type="text"/>

Click **Apply** or **Reset** to take effect.

TZO

TZO: TZO is one kind of the DDNS providers. User can refer to the [TZO.com](http://www.tzo.com): visit <http://www.tzo.com/> to apply a dynamic domain account when selecting this DDNS provider. Enter the e-mail address, password and domain name when enabled the TZO.

DDNS

DynDNS	TZO
Enabled	<input type="checkbox"/>
E-mail Address	<input type="text"/>
TZO Password	<input type="text"/>
Domain Name	<input type="text"/>

Click **Apply** or **Reset** to take effect.

Easy Link

Easy Link	
Enabled	<input checked="" type="checkbox"/>
Domain Name	<input type="text" value="wcs0030"/> .level1dns2.net <input type="button" value="Check Available"/>
Refresh Time	<input type="text" value="1 hr"/> <input type="button" value="Update Now"/>
Status	Disconnected

Easy Link – the IP camera had bundle with free Level1DNS™ service that allows user to remote access the IP camera via internet. The default domain name is MAC address, you can also register your own name on-line but it have to check the available first. The status will show the connection with Level1DNSTM service.

Notice: Please make sure the internet connection is ready first!

Event

Motion Detection

Motion can be detected by measuring change in speed or vector of an object or objects in the field of view. This section explains how to configure the Network Camera to enable motion detection. There are three motion detection windows can be configured.

Motion Detection

Detection Setting | Notification

MD Region Setting

Win 1 Win 2 Win 3

Enable Windows 1

Sensitivity

Threshold

After enabling the Motion Detection Window, drag the mouse on preview video to indicate the detecting region.

※The MD setting only activate in stream 1 .

Apply Reset

Detection Setting: Select and enable the motion detection windows function. Easier to trigger event by higher the sensitivity value and lower the Threshold value.

Notification: To react in response to particular events. A typical application is that when a motion is detected, the Network Camera sends buffered images to a FTP server, SMTP or Samba as notifications. In this page, you can specify which notification messages will be sent when a trigger is activated.

Motion Detection

Detection Setting | Notification

FTP Notification

Samba Notification

SMTP Notification

HTTP Notification

Apply Reset

Click **Apply** or **Reset** to take effect.

Notification setting

When an event is triggered, you can specify what kind of action will be performed. You can configure the Network Camera to send video streaming URL, or video clip to your

email address, FTP site or samba.

FTP: File Transfer Protocol (FTP) is often used as an application component to automatically transfer files for program internal functions. Select to send the media files to a FTP server when a trigger is activated. Enter the FTP IP address or hostname; by default, the FTP port server is set to 21, enter account name and password to configure the setting.

Notification Settings

FTP	SMTP	Samba	HTTP
Server Selection	Primary FTP Server		
FTP Address	IP Address 0 . 0 . 0 . 0		
FTP Port	21		
Account Name			
Account Password			
Attachment	Video Clip		

Apply **Reset**

Click **Apply** or **Reset** to take effect.

SMTP: Select to send the media files via Email when a trigger is activated.

From: Enter the email address of the sender.

To: Enter the email address of the recipient. Many recipients are separated by commas.

My name: The title shown in the email.

Subject: Enter the subject of the email.

Attached: There are two choices of media types available: video streaming URL and video clip.

SMTP Server and port number: Enter the server host name and port number of the email server.

Authentication: Select the authentication type from the drop-down list.

Email Account: Enter the user name of the email account if necessary.

Email Password: Enter the password of the email account if necessary.

Notification Settings

FTP	SMTP	Samba	HTTP
From	<input type="text"/>		
To	<input type="text"/>		
CC	<input type="text"/>		
My Name	<input type="text"/>		
Subject	<input type="text"/>		
Attachment	<input type="checkbox"/> Video Streaming URL <input type="checkbox"/> Video Clip		
Server Selection	Primary Email Server <input type="button" value="v"/>		
SMTP Server	<input type="text"/>		
SMTP Port	25 <input type="text"/>		
Authentication	LOGIN <input type="button" value="v"/>		
Email Account	<input type="text"/>		
Email Password	<input type="text"/>		

Click **Apply** or **Reset** to take effect.

Samba: Select to send the network file system media files via network neighborhood when a trigger is activated.

IP Address: Enter the IP address of the samba server.

Hostname: Enter the domain name of the samba server.

User Name: Enter the user name of the samba server.

Password: Enter the password of the samba server.

Workgroup: Enter the workgroup of the samba server.

Share DIR: Enter the share DIR of the samba server.

Notification Settings

FTP	SMTP	Samba	HTTP
Server Address	IP Address <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>		
User Name	<input type="text"/>		
Password	<input type="text"/>		
WorkGroup	<input type="text"/>		
Share DIR	<input type="text"/>		

Click **Apply** or **Reset** to take effect.

System

System Log

Log: To send a system log to the network camera when a trigger is activated.

System Log

System Log
<pre>LOG_INFO-udhcpd:DHCP lease renewal was successful, Thu Jan 1 00:00:20 2009 LOG_INFO-udhcpd:Communication established with DHCP server [192.168.50.1], Thu Jan 1 00:00:20 2009 LOG_NOTICE-WebServer :User [admin] logged in to [web server], Thu Jan 1 00:30:43 2009 LOG_INFO-stream :Channel [H264] started streaming to host [192.168.50.134], Thu Jan 1 00:31:12 2009 LOG_INFO-stream :Channel [H264] stopped streaming to host [192.168.50.134], Thu Jan 1 00:36:05 2009 LOG_INFO-stream :Channel [H264] started streaming to host [192.168.50.134], Thu Jan 1 00:36:12 2009 LOG_INFO-stream :Channel [H264] stopped streaming to host [192.168.50.134], Thu Jan 1 00:37:59 2009 LOG_INFO-stream :Channel [H264] started streaming to host [192.168.50.134], Thu Jan 1 00:46:47 2009 LOG_INFO-stream :Channel [H264] stopped streaming to host [192.168.50.134], Thu Jan 1 00:49:40 2009</pre>

This page displays the system's log in chronological order. The system log is stored in the Network Camera's buffer area and will be overwritten when reaching a certain amount.

Click **Retrieve** to retrieve the log, or click **Save to file** to save the file in the specify location.

Date & Time Settings

Manual: The user can enter the date and time manually.

Clone from PC: Sync with computer time; click clone to synchronize the date and time of the Network Camera with the local computer. The read-only date and time of the PC is displayed as updated.

Date and Time

Date and Time						
Manual	Year	2009	Month	1	Day	1
	Hour	0	Minute	0	Second	0
Clone from PC	Year	2009	Month	12	Day	17
	Hour	16	Minute	39	Second	39
<input type="checkbox"/> Clone						
NTP	TimeZone	(GMT+8)HONG KONG				
	NTP Server 1	tick.stdtime.gov.tw				
	NTP Server 2	clock.stdtime.gov.tw				
	Daylight Saving	<input type="checkbox"/> Enabled				

Apply Reset

NTP: Select to update the time with the NTP server on hourly, daily, weekly, or monthly basis.

Time Zone: According to your local time zone, select one from the drop-down list.

NTP Server 1 and Server 2: Enter the address of the NTP server.

Daylight Saving: Enable this option to retain the Daylight Saving Time changes automatically.

Click **Apply** or **Reset** to take effect.

Device Information

Video/Audio Setting: To view all the video/audio setting information about the network camera.

Device Information

System Information	Network Settings	Video/Audio Settings
MAC Address	00:26:82:1b:da:91	
Firmware Version	v1.0.0.10	
Firmware Release	12/09/2009	
Product Name	FCS-1121	
Model Number	100	
Company Name	Level One	
Comments	H.264 Megapixel PoE Network Camera	
UPnP Name	FCS-1121-da91	

Network Setting: To view all the network setting information about the network camera.

Device Information

System Information	Network Settings	Video/Audio Settings
IP setting type	DHCP	
IP Address	192.168.50.115	
Subnet Mask	255.255.255.0	
Default Gateway	192.168.50.1	
Primary DNS	168.95.1.1	
Secondary DNS	61.31.233.1	
UPnP	Enabled	
DynDNS	Disabled	
TZO	Disabled	

System Information: To view all the system information about the network camera.

Device Information

System Information	Network Settings	Video/Audio Settings
Stream 1		
Video Codec	H264	
Video Resolution	1280x800(WXGA)	
Video Frame Rate	30 fps	
Video Bitrate	12000 Kbps	
Audio Codec	G.711	
Multicast IP	N/A	
Stream 2		
Video Codec	MJPEG	
Video Resolution	1280x800(WXGA)	
Video Frame Rate	20 fps	
Video Quality	Standard	
Audio Codec	G.711	
Multicast IP	N/A	

Maintenance

User Management

This section explains how to enable password protection and create multiple accounts.

Privilege Setting: Enter the new user's name and password. Select the privilege for new user account. Click **Add** to take effect. The administrator account name is "admin", which is permanent and can not be deleted.

Access rights are sorted as following (Viewer, Administrator and Remote Viewer). Only administrators can access the Configuration page. Viewers can access the main page for live viewing only. The privilege of Remote Viewer is same as viewer except TCP protocol can only be selected for live viewing page. Administrators can add up to 10 user accounts. You also can change user's access rights or delete user accounts. Select an existing account to modify and make necessary changes; then click **Update** or **Delete** to take effect.

User Management

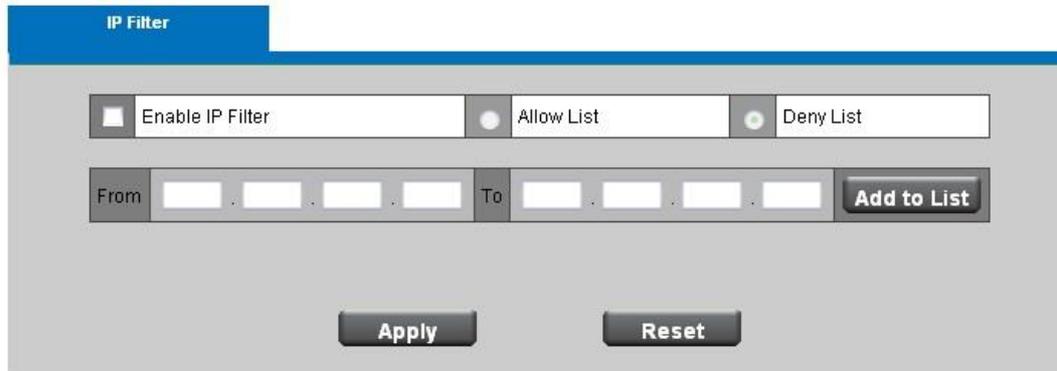
Privilege Setting

Index	User Name	Password	Confirm Password	Privilege	Action
1	admin	●●●●	●●●●	Administrator ▼	Add Delete Update
2	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
3	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
4	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
5	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
6	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
7	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
8	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
9	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update
10	<input type="text"/>	<input type="password"/>	<input type="password"/>	Viewer ▼	Add Delete Update

IP Filter

IP Filter: Enable the IP filter and set of allow or deny IP address range to server. Click **Add to list** to add the IP range to the IP filter list.

IP Filter



The screenshot shows the IP Filter configuration page. At the top, there is a blue header with the text "IP Filter". Below the header, there are three radio button options: "Enable IP Filter" (which is selected), "Allow List", and "Deny List". Below these options, there are two IP address input fields labeled "From" and "To", each with four input boxes for the octets. To the right of the "To" field is a button labeled "Add to List". At the bottom of the form, there are two buttons: "Apply" and "Reset".

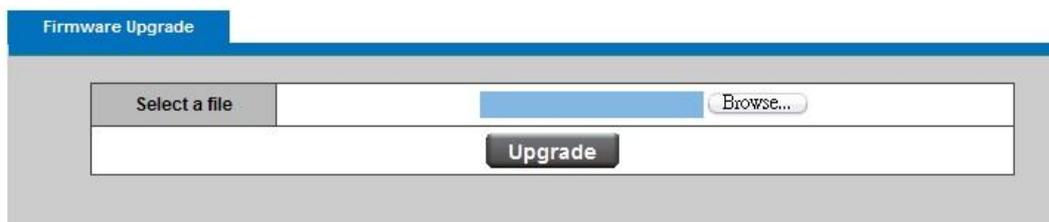
Click **Apply** or **Reset** to take effect.

Firmware Upgrade

This feature allows you to upgrade the firmware on your Network Camera. It takes about few minutes to complete the process. Note that do not power off the Network Camera during the upgrade.

Upgrade: Click **Browse...** and specify the firmware file. Click **Upgrade**. The Network Camera starts to upgrade and will reboot automatically when the upgrade completes.

Firmware Upgrade



The screenshot shows the Firmware Upgrade page. At the top, there is a blue header with the text "Firmware Upgrade". Below the header, there is a file selection area with a text box containing "Select a file" and a "Browse..." button. Below this area is a large "Upgrade" button.

Configuration

This feature allows you to export/import the configuration files of the network camera.

Import/Export: Click **export** to pop up a dialog to indicate the location and file to

export. Click **browse** to indicate the location and file of the camera configuration and click **import** to import the configuration file back into the network camera.

Configuration



The screenshot shows a web interface for configuration. At the top, there is a blue tab labeled "Import / Export". Below this, there is a table with two rows. The first row is for "Export" and contains a button labeled "Export". The second row is for "Import" and contains the text "Please browse a file to import" followed by a blue file input field and a "Browse..." button. Below the input field is a button labeled "Import".

Export	<input type="button" value="Export"/>
Import	Please browse a file to import <input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Import"/>

Reset to default

Reset to default: Click **Reset to Default** to restore the network camera to factory default setting.

Reset to Default



The screenshot shows a web interface for resetting to default. At the top, there is a blue tab labeled "Reset to Default". Below this, there is a large white rectangular area. On the left side of this area is a button labeled "Press Button to Reset". On the right side is a button labeled "Reset".

<input type="button" value="Press Button to Reset"/>	<input type="button" value="Reset"/>
--	--------------------------------------