



levelone®

FCS-4047

Network IR PTZ Camera

User's Manual

Outdoor

Ver. 1.3

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# 1. Overview

With the latest encoding technology and built-in IR LEDs, Network IR PTZ Camera presents strong HDR and high sensitivity performance, and is capable of capturing high resolution images during daylight hours and even, in pitch-black darkness.

At night, or in any low/zero lighting environments, Network IR PTZ Camera is able to provide effective illumination to the objects 200 meters away, and also delivers crystal clear images with high quality 30x optical zoom lens in long distance.

With delicate mechanism design, Network IR PTZ Camera features Servo Feedback technology, which makes the camera precisely return to the previous position without stalling, and ensures the target monitoring region is fully secured. IP66 International standard is also guaranteed for outdoor installation. Furthermore, combining 0 downtime power switching (ZDT) technology, the camera ensures smooth streaming without sudden power-loss.

## 1.1 Features

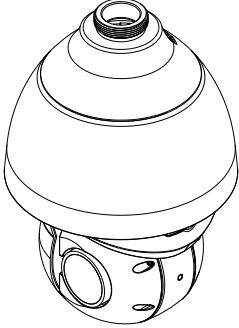
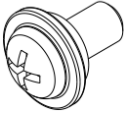
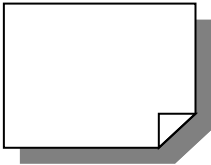

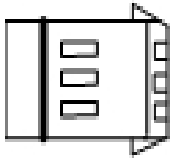
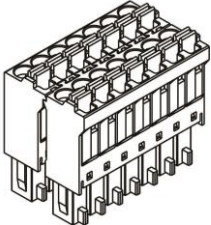
- Sony Progressive Scan CMOS Sensor 2M/3M/4M Resolution\*
- Up to Powerful 30x Optical Zoom
- 10x Digital Zoom Support
- High Dynamic Range (120dB)
- Quad Streams Support
- Quad Codec: H.264 Baseline / Main / High Profile + MJPEG
- True Day & Night (ICR)
- 2D/3D Noise Reduction
- 802.3at PoE+ With 4 Pair Support for IR & Heater Activation
- Cisco UPoE Support
- Servo Feedback
- Weatherproof (IP66 International)
- 0 Downtime Power Switching (ZDT)
- IR Distance up to 200m\*
- IR Illumination Adjustment by Zoom Ratio
- BNC & RS-485 Support
- Electrical Image Stabilizer (EIS) Support

\*Optional

## 1.2 Package Contents

Please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact the dealer for assistance.

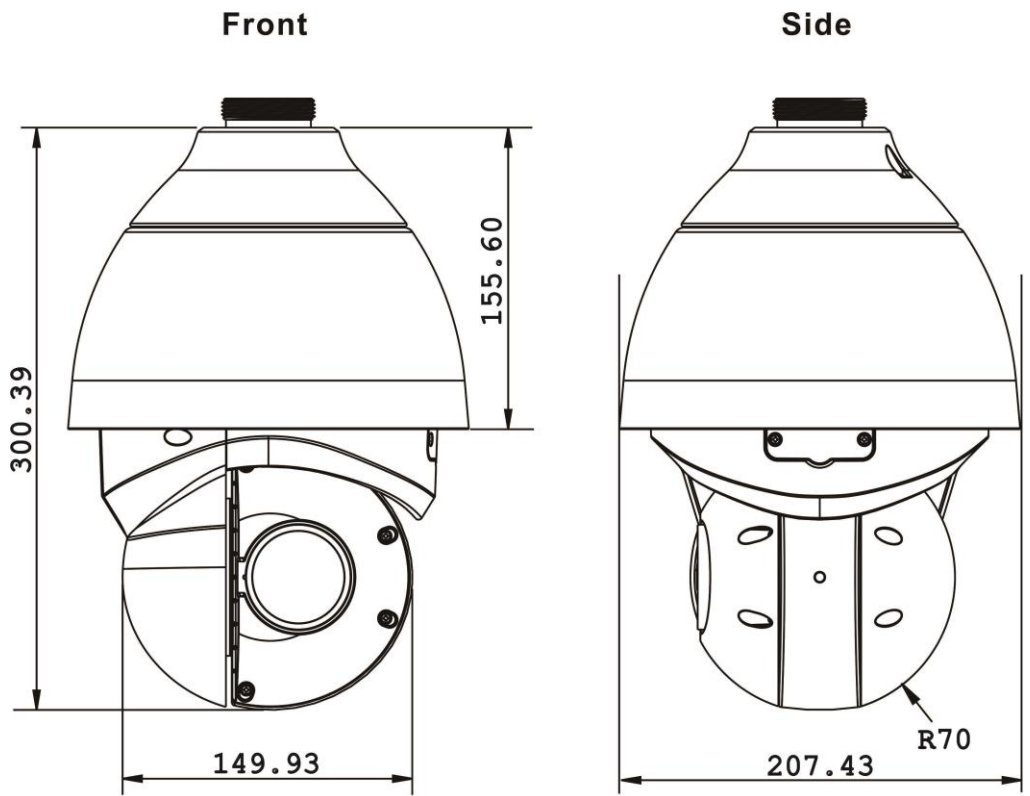
### Outdoor

 <p>Network IR PTZ Camera</p>	 <p>M4 Security Screw with Rubber</p>
 <p>Quick Guide</p>	 <p>CD</p>
 <p>3-Pin Power Terminal Block</p>	 <p>14-Pin Alarm/Audio I/O Terminal Block</p>



**NOTE:** To purchase power adaptor, please contact the camera manufacturer for further information.

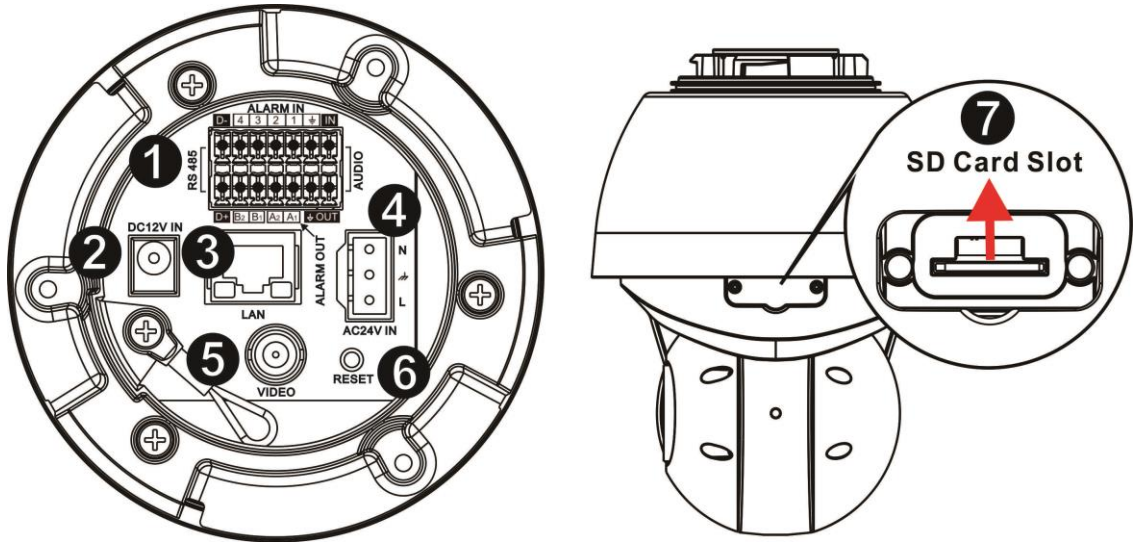
### 1.3 Dimensions



Unit:mm

## 1.4 Connectors

Refer to the diagrams below for the positions of the reset button and various connectors of the camera. Definition of the reset button and the connectors are given as follow.



No.	Connector	Definition
1	<b>Audio/Alarm I/O &amp; RS-485 Connector *</b>	Audio/Alarm I/O & RS-485 connection
2	<b>Power Connector (DC12V)</b>	DC12V power connection
3	<b>RJ-45 Port **</b>	IEEE 802.3at (PoE+) 4-Pair 60W only
4	<b>Power Connector (AC24V / DC28-48V)</b>	AC24V / DC28-48V power connection
5	<b>BNC</b>	For analog video output
6	<b>Reset Button</b>	Press the button with a proper tool for at least 20 seconds to restore the system.
7	<b>SD Card Slot</b>	Insert the SD card into the card slot to store videos and snapshots. Do not remove the SD card when the camera is powered on.

\*Do **NOT** connect external power supply to the alarm I/O connector of the camera.

\*\*Please contact the manufacturer for compatible PoE injector.



**NOTE:** DC12V power jack and AC24V / DC28-48V power connector cannot be used at the same time in case of unexpected damage.

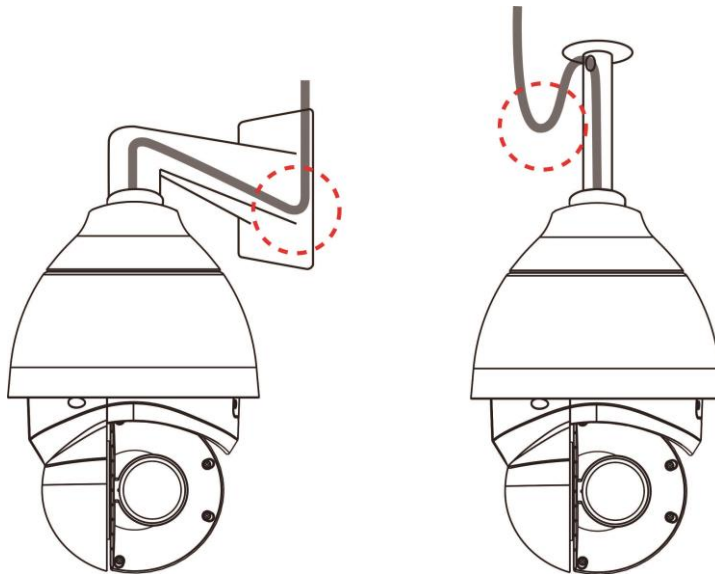


**NOTE:** It is not recommended to record with the SD card for 24/7 continuously, as it may not be able to support long term continuous data read/write. Please contact the manufacturer of the SD card for information regarding the reliability and the life expectancy.

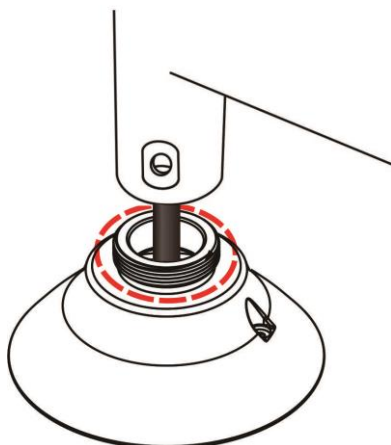
## 2. Camera Cabling

The outdoor models are being IP66-rated to prevent water from entering the camera. However, water might still enter the camera if it is being improperly installed. Please make sure the warnings below are strictly followed when installing the camera.

- Place all cables and the adaptor in dry and well-waterproofed environments, e.g. waterproof boxes. The purpose is to prevent moisture accumulation inside the camera and moisture penetration into cables.
- While running cables, slightly bend the cables to a U-shaped curve to make a low point (as demonstrated in the figures below). The purpose is to prevent water from entering the camera along the cables from above.

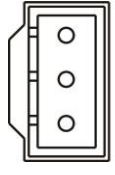


- The cable entry hole of the outdoor mounting kit (indicated in the figure below) needs to be sealed with thread seal tape to avoid water from entering the camera.



## 2.1 Power Connection

To power up the camera, connect the DC12V or AC24V / DC28-48V power adaptor to the power connector of the camera and the power outlet. Refer to the diagram and pin definition below for AC24V / DC28-48V power connection.



Pin	Definition	
1	AC24V N	DC28-48V +
2	GND	-
3	AC24V L	DC28-48V -

Alternatively, users can use an Ethernet cable and connect it to the RJ-45 port of the camera and an IEEE 802.3at (PoE+) 4-Pair 60W switch.

### **Zero Downtime Power Switching (ZDT)**

When users connect DC12V power jack and the RJ-45 port at the same time, the power input comes from the DC12V connector. If the DC12V power source fails, the camera will switch power input seemingly to the RJ-45 port until the DC12V power source is restored.

## 2.2 Ethernet Cable Connection

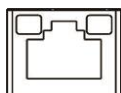
To connect one end of the Ethernet cable to the RJ-45 connector of the camera, and plug the other end of the cable to the network switch or PC.



**NOTE:** In some cases, Ethernet crossover cable might be needed when connecting the camera directly to the PC.



**NOTE:** Check the status of the link indicator and activity indicator LEDs. If the LEDs are unlit, please check the LAN connection.



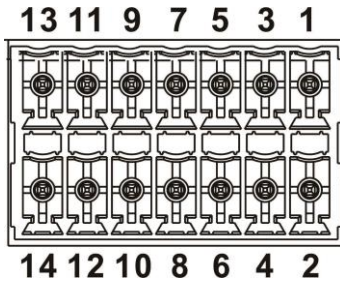
Green Link Light indicates good network connection.

Orange Activity Light flashes for network activity indication.



## 2.3 Audio / Alarm I/O & RS-485 Connection

Please refer to the diagram and pin definition tables below for audio/alarm I/O & RS-485 connection.



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio In	5	Alarm In 1	9	Alarm In 3	13	RS-485 D-
2	Audio Out	6	Alarm Out A1	10	Alarm Out B1	14	RS-485 D+
3	GND (Alarm I/O & RS-485)	7	Alarm In 2	11	Alarm In 4		
4	GND (Audio I/O)	8	Alarm Out A2	12	Alarm Out B2		

### 3. System Requirements

To perform the camera via web browser, please ensure the PC is in good network connection, and meet the system requirement as described below.

Items	System Requirement
<b>Personal Computer</b>	<b>Minimum :</b> 1. Intel® Core™i5-2430M @ 2.4 GHz 2. 2 GB RAM or more
	<b>Recommended :</b> 3. Intel® Core™i7-870 @ 2.93 GHz 4. 8 GB RAM
<b>Operating System</b>	Windows VISTA / Windows XP / Windows 7
<b>Web Browser</b>	Microsoft Internet Explorer 10.0 or later (recommended) Firefox (32-bit) Safari
<b>Network Card</b>	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) or 1000Base-T operation
<b>Viewer</b>	ActiveX control plug-in for Microsoft IE Apple QuickTime 7.7.7 or Before for Firefox



**NOTE:** The ITE is to be connected only to PoE networks without routing to the outside plant or equivalent description.

## 4. Access Camera

For initial access to the camera, users can search the camera through the installer program: DeviceSearch.exe, which can be found in “Device Search” folder in the supplied CD.

### Accessing the Camera by Device Search Software

- Step 1:** Double click on the program Device Search.exe.
- Step 2:** After its window appears, click on the <Device Search> button on the top. All the finding IP devices will be listed in the page.
- Step 3:** Find the camera in the list by its IP address and click on it. The default IP address of the camera is: **192.168.0.250**.
- Step 4:** The default IP address of the camera may not be in the same LAN as the IP address of the PC. If so, the IP address of the camera needs to be changed. Right click on the camera and click <Network Setup>. Meanwhile, record the MAC address of the camera, for future identification.
- Step 5:** The <Network Setup> page will come out. Select <DHCP> and click <Apply> down the page. The camera will be assigned with a new IP address.
- Step 6:** Click <OK> on the Note of setting change. Wait for one minute to re-search the camera.
- Step 7:** Click on the <Device Search> button to re-search all the devices. Find the camera in the list by its MAC address. Then double click or right click and select <Browse> to access the camera directly via a web browser.

**Step 8:** A prompt window requesting for default username and password will appear. Enter the default username and password shown below to login to the camera.

Login ID	Password
Admin	1234



**NOTE:** ID and password are case sensitive.



**NOTE:** It is strongly advised that administrator's password be altered for the security concerns. Refer to the [Network IR PTZ Camera Menu Tree](#) in the supplied CD for further details.

### **Installing DCViewer Software Online**

For the initial access to the camera, a client program, DCViewer, will be automatically installed to the PC when connecting to the camera.

If the web browser doesn't allow Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (refer to section [Setup Internet Security](#)) to continue the process.

The Information Bar (just below the URL bar) may come out and ask for permission to install the ActiveX Control for displaying video in browser. Right click on the Information Bar and select <Install ActiveX Control...> to allow the installation. A security warning window will pop up. Click on <Install> to carry on software installation.

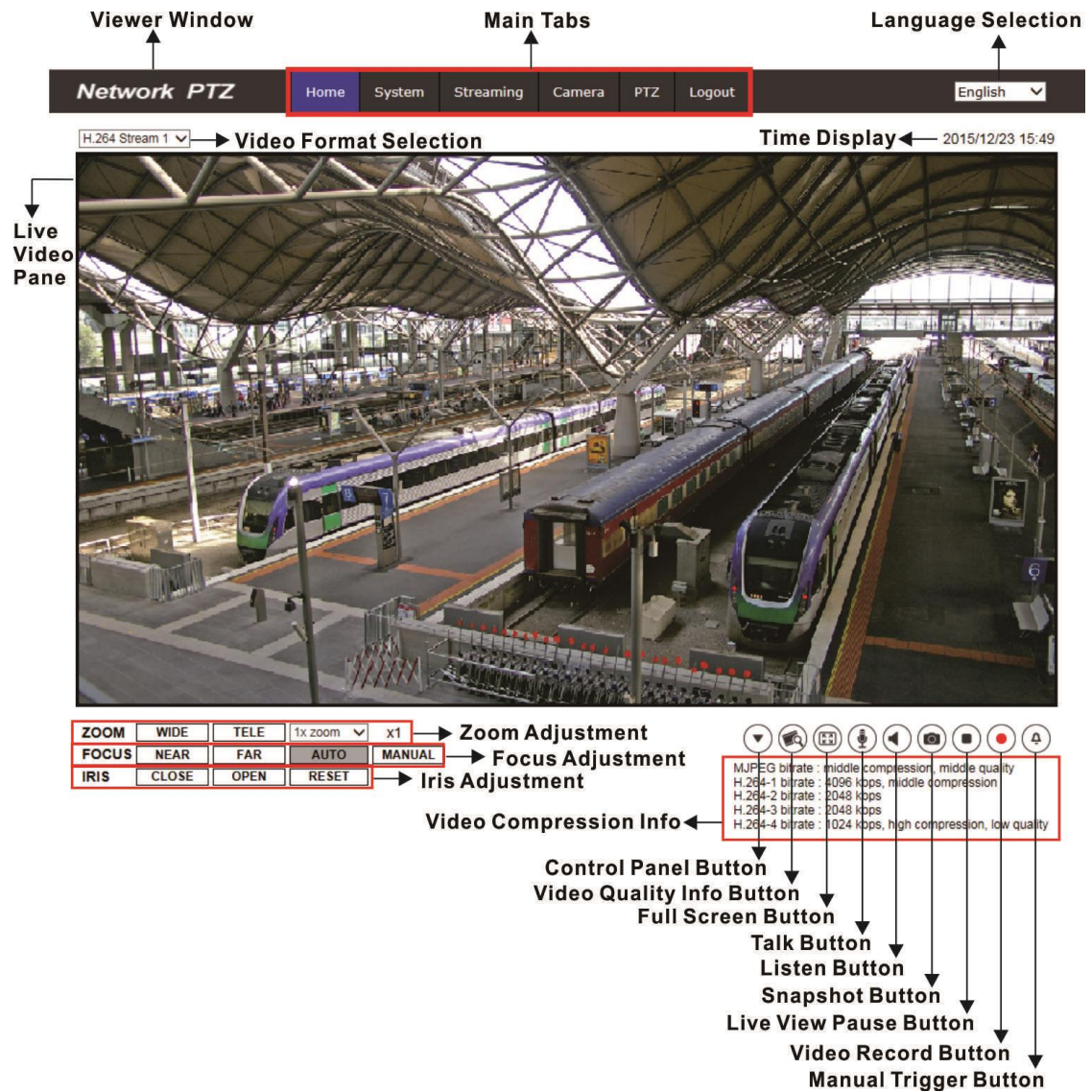
The download procedure of DCViewer software is specified as follows.

**Step 1:** In the DCViewer installation window, click on <Next> to start the installation.

**Step 2:** A status bar will be displayed to show the installation progress. After the installation is completed, click on <Finish> to exit the installation process.

**Step 3:** Click on <Finish> to close the DCViewer installation page.

Once the Viewer is successfully installed, the Home page of the camera will be shown as the figure below.



### **Zoom and Focus Adjustment**

The live image will be displayed on the Home page when the camera is successfully accessed. If zoom or focus is not at the desired position, please use the function buttons on the Home page for adjustment. Refer to the Network IR PTZ Camera Menu Tree in the supplied CD for more details about the function buttons.

## 5. Setup Video Resolution

Users can setup video resolution on Video Format page of the user-friendly browser-based configuration interface.

Video Format can be found under this path: **Streaming> Video Format**.

The screenshot shows the 'Network PTZ' configuration interface. The 'Streaming' menu item is highlighted in red. The 'Video Format' page is displayed, showing the following settings:

- Video Resolution :** H.264 + H.264
- Format 1 :** 2688 x 1512 (30 fps) / H-264-1
- Format 2 :** 720 x 480 (30 fps) / H-264-2
- BNC support :** Yes
- Save** button
- Note :** Image attachment by FTP or E-mail will be available only while MJPEG streaming is selected.

The default value of the video resolution is as below.

2M	Normal Mode	H.264- 1920 x 1080 (60/50 fps) + H.264- 720 x 480 (60 fps) / 720 x 576 (50 fps)
	HDR Mode-2 Shutter	H.264- 1920 x 1080 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode-3 Shutter	H.264- 1920 x 1080 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
3M	Normal Mode	H.264- 2048 x 1536 (60/50 fps) + H.264- 720 x 480 (60 fps) / 720 x 576 (50 fps)
	HDR Mode-2 Shutter	H.264- 2048 x 1536 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode-3 Shutter	H.264- 2048 x 1536 (15/13 fps) + H.264- 720 x 480 (15 fps) / 720 x 576 (13 fps)
4M	Normal Mode	H.264- 2688 x 1512 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode-2 Shutter	H.264- 2560 x 1440 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode-3 Shutter	H.264- 2560 x 1440 (15/13 fps) + H.264- 720 x 480 (15 fps) / 720 x 576 (13 fps)

For more details about the combinations of video resolution, please refer to the Network IR PTZ Camera Menu Tree in the supplied CD.

## 6. Configuration Files Export / Import

To export / import configuration files, users can access the Maintenance page on the user-friendly browser-based configuration interface.

The Maintenance setting can be found under this path: **System> Maintenance**.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the camera. It is especially convenient to make multiple cameras having the same configuration.

### **Export**

Users can save the system settings by exporting the configuration file (.bin) to a specified location for future use. Click on the <Export> button, and the popup File Download window will come out. Click on <Save> and specify a desired location for saving the configuration file.

### **Upload**

To upload a configuration file to the camera, click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

## 7. Tech Support Information

This chapter will introduce how to delete previously-installed DCViewer in the PC and how to setup the Internet security.

### 7.1 Delete the Existing DCViewer

For users who have installed the DCViewer in the PC previously, please remove the existing DCViewer from the PC before accessing to the IP camera.

#### **Deleting the DCViewer**

In the Windows <Start Menu>, activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently installed programs> list, select <DCViewer> and click on the button <Remove> to uninstall the existing DCViewer.

#### **Deleting Temporary Internet Files**

To improve browser performance, it is suggested to clean up all the files in the <Temporary Internet Files>. The procedure is as follows.

**Step 1:** In the web browser, clicks on the <Tools> tab on the menu bar and select <Internet Options>.

**Step 2:** Click on the <Delete> button under the <Browsing History> section.

**Step 3:** In the appeared window, tick the box beside the <Temporary Internet Files> and click on <Delete> to start deleting the files.



## 7.2 Setup Internet Security

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-ins settings.

### **Internet Security Level: Default**

**Step 1:** Start the Internet Explorer (IE).

**Step 2:** Click on the <Tools> tab on the menu bar and select <Internet Options>.

**Step 3:** Click on the <Security> tab, and select <Internet> zone.

**Step 4:** Down the page, click on the <Default Level> button and click on <OK> to confirm the setting. Close the browser window, and restart a new one later to access the IP camera.

### **ActiveX Controls and Plug-ins Settings**

**Step 1:** Repeat **Step 1 to Step 3** of the previous section above.

**Step 2:** Down the page, click on the <Custom Level> button to change ActiveX controls and plug-ins settings. The Security Settings window will pop up.

**Step 3:** Under <ActiveX controls and plug-ins>, set **ALL** items (as listed below) to <Enable> or <Prompt>. Please note that the items vary by IE version.

#### **ActiveX controls and plug-ins settings:**

1. Binary and script behaviors.
2. Download signed ActiveX controls.
3. Download unsigned ActiveX controls.
4. Allow previously unused ActiveX controls to run without prompt.
5. Allow Scriptlets.
6. Automatic prompting for ActiveX controls.
7. Initialize and script ActiveX controls not marked as safe for scripting.
8. Run ActiveX controls and plug-ins.
9. Only allow approved domains to use ActiveX without prompt.
10. Script ActiveX controls marked safe for scripting\*.
11. Display video and animation on a webpage that does not use external media player.

**Step 4:** Click on <OK> to accept the settings. A prompt window will appear for confirming the setting changes, click <Yes(Y)> to close the Security Setting window.

**Step 5:** Click on <OK> to close the Internet Options screen.

**Step 6:** Close the browser window, and restart a new one later to access the IP camera.