

# H.265 Network Cameras

## User Manual

Ver. 1.0



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## Revision History

| <b>Version</b> | <b>Description</b> | <b>Date</b> |
|----------------|--------------------|-------------|
| 1.0            | Initial release    | August 2019 |

# Disclaimer



## CAUTION!

The default password is used for your first login. To ensure account security, please change the password after your first login. You are recommended to set a strong password (no less than eight characters).




- To the maximum extent permitted by applicable law, the product described, with its hardware, software, firmware and documents, is provided on an “as is” basis.
- Best effort has been made to verify the integrity and correctness of the contents in this manual, but no statement, information, or recommendation in this manual shall constitute formal guarantee of any kind, expressed or implied. We shall not be held responsible for any technical or typographical errors in this manual. The contents of this manual are subject to change without prior notice. Update will be added to the new version of this manual.
- Use of this manual and the subsequent result shall be entirely on the user’s own responsibility. In no event shall we be reliable to you for any special, consequential, incidental, or indirect damages, including, among others, damages for loss of business profits, business interruption, or loss of data or documentation in connection with the use of this product.
- Video and audio surveillance can be regulated by laws that vary from country to country. Check the law in your local region before using this product for surveillance purposes. We shall not be held responsible for any consequences resulting from illegal operations of the device.
- The illustrations in this manual are for reference only and may vary depending on the version or model. The screenshots in this manual may have been customized to meet specific requirements and user preferences. As a result, some of the examples and functions featured may differ from those displayed on your monitor.
- This manual is a guide for multiple product models and so it is not intended for any specific product.
- Due to uncertainties such as physical environment, discrepancy may exist between the actual values and reference values provided in this manual. The ultimate right to interpretation resides in our company.

## Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

## Symbols

The symbols in the following table may be found in this manual. Carefully follow the instructions indicated by the symbols to avoid hazardous situations and use the product properly.

| Symbol  | Description   |
|---|---|
|  <b>WARNING!</b> | Contains important safety instructions and indicates situations that could cause bodily injury. |
|  <b>CAUTION!</b> | Means reader be careful and improper operations may cause damage or malfunction to product.     |
|  <b>NOTE!</b>    | Means useful or supplemental information about the use of product.                              |

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# Chapter 1. Overview

Adopting a small yet robust 3-axis gimbal design, the usability of CAM1471H2-2 H.265 IR Micro Dome IP Camera is highly enhanced. Besides, the lens can be adjusted to desired angle, so even when the camera has to be installed at unfavorable position, ideal field of view can be captured by repositioning the lens.

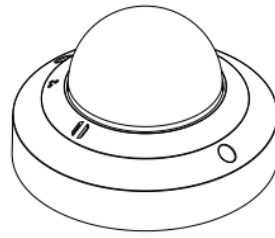
Equipped with HDR function, the camera utilizes the state of the art image processing technology, providing up to 4M resolution, high quality HDR video. Its HDR capability captures more image detail under challenging light conditions, such as entrance area, warehouse loading bay, and parking lot.

## 1.1 Feature

- Multiple Progressive Scan CMOS Sensor Support 4M Resolution
- Multi-exposure HDR
- Multi Codec Support (H.265 / H.264 / MJPEG)
- Low Latency Streaming
- Quad Streams Support
- True Day/Night Function (ICR)
- IR LED (working distance up to 15m)
- BNC Analog Output
- 3D Motion Compensated Noise Reduction (MCTF)
- Smart Event Function-
- External Input / Motion Detection / Network Failure Detection / Tampering Alarm / Periodical Event / Manual Trigger / Audio Detection
- Text Overlay and Privacy Masks
- Micro SD/SDHC/SDXC
- Smart Low Bitrate Control
- Weatherproof (IP66 international)\*  
(\* ) Optional

## 1.2 Package Contents

Please check the package containing the following items listed below.



CAM1471H2-5 H.265 IR Micro Dome IP Camera  
Indoor / Outdoor (with Cable)



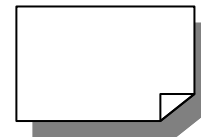
Plastic Anchors (x3)



Self-tapping screws (x3)



Security Torx



Quick Guide



**NOTE:** To use an external power supply, please contact the camera manufacturer to confirm that the power supply uses the same power specifications as the camera. The power supply must comply with the LPS requirements.



**NOTE:** The supplied self-tapping screws are for soft substances / materials such as wood. For other installation environments such as cement wall, users **MUST** pre-drill and use plastic anchors before fastening the supplied self-tapping screws on the wall.

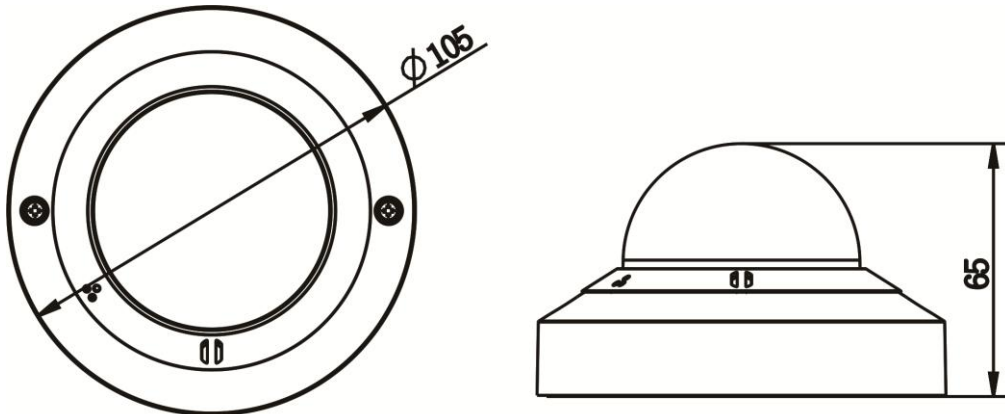


**NOTE:** Do not replace batteries of the camera. Risk of explosion may occur if the battery is replaced by an incorrect type.

### 1.3 Dimensions

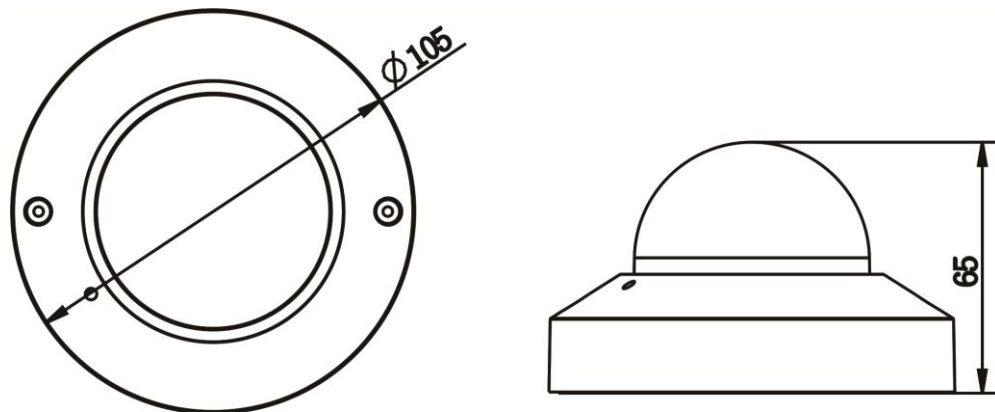
The dimensions of the camera are shown below.

#### Indoor



Unit:mm

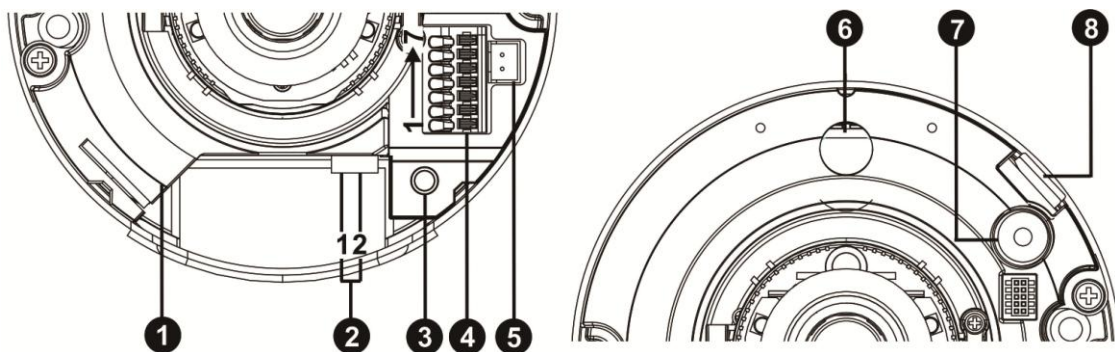
#### Outdoor



Unit:mm

### 1.4 Connectors (Indoor Only)

The diagram below shows the default button, microSD card slot and various connectors of the camera. Definition of each connector is given as follows.





| No. | Connector           | Pin | Definition  | Remarks  |                            |
|-----|---------------------|-----|---|--|----------------------------|
| 1   | RJ-45               | -   | Network and PoE connections   |  |                            |
| 2   | Power (DC 12V)      | 1   | DC 12V  | Power connection   |                            |
|     |                     | 2   | GND   |  |                            |
| 3   | Default Button      | -   | Press the button with a proper tool for at least 20 seconds to restore the system.  |  |                            |
| 4   | Alarm & Audio I/O   | 1   | Alarm Out +   | Alarm connection<br><br>#Do NOT connect external power supply to the alarm I/O connector of the IP camera. |                            |
|     |                     | 2   | Alarm Out -   |  |                            |
|     |                     | 3   | Alarm In +  |  |                            |
|     |                     | 4   | Alarm In -  | Ground connection  |                            |
|     |                     | 5   | GND   |  |                            |
|     |                     | 6   | Audio Out (Line Out)  |  | Two-way audio transmission |
|     |                     | 7   | Audio In (Line In)  |  |                            |
| 5   | BNC                 |     | Analog video output. Please contact the manufacturer for the compatible BNC cable.  |  |                            |
| 6   | Built-in Speaker    |     | Audio Out   |  |                            |
| 7   | Built-in Microphone |     | Audio In  |  |                            |
| 8   | microSD Card Slot   |     | Insert the microSD card into the card slot to store videos and snapshots. Do not remove the microSD card when the camera is powered on. |  |                            |

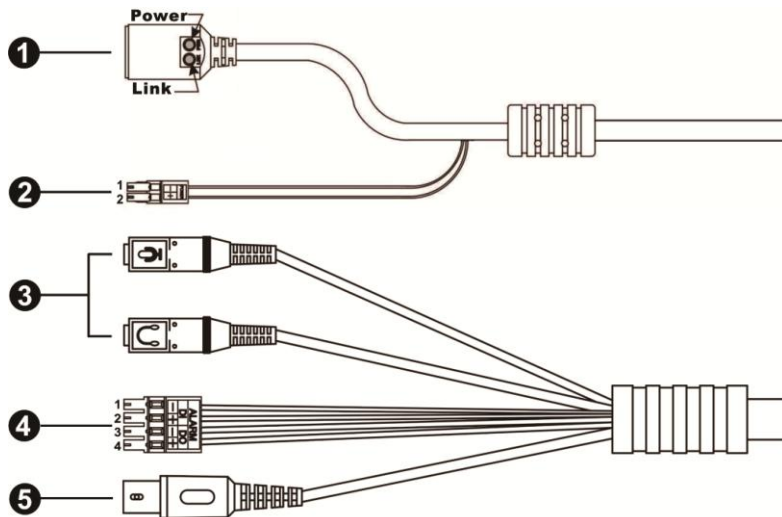


**NOTE:** To avoid audio quality degradation, do NOT connect built-in microphone and external audio-input device (via Line In) at the same time. So does the audio-output connection.



**NOTE:** It is not recommended to record with the microSD 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 microSD card for information regarding the reliability and the life expectancy.

## 1.5 Function Cable Definition (Outdoor Only)



| No. | Connector                        | Pin   | Definition   | Remarks   |
|-----|----------------------------------|-------|--|---|
| 1   | RJ-45                            | -     | Network and PoE connections  |   |
| 2   | Power Jack (DC 12V)              | 1     | DC 12V   | Power connection  |
|     |                                  | 2     | GND  |   |
| 3   | Audio I/O                        | Pink  | Audio In (Line In)   | Two-way audio transmission  |
|     |                                  | Green | Audio Out (Line Out)   |   |
| 4   | Alarm I/O (4-Pin Terminal Block) | 1     | Alarm In -   | Alarm connection<br><br>#Do <b>NOT</b> connect external power supply to the alarm I/O connector of the IP camera. |
|     |                                  | 2     | Alarm In +   |   |
|     |                                  | 3     | Alarm Out -  |   |
|     |                                  | 4     | Alarm Out +  |   |
| 5   | BNC                              | -     | Analog video output  |   |
| -   | Default Button                   | -     | Please refer to Default Button in the table under <a href="#">Camera's Connectors (Indoor Only)</a> .    |   |
| -   | microSD Card Slot                | -     | Please refer to microSD Card Slot in the table under <a href="#">Camera's Connectors (Indoor Only)</a> . |   |

# Chapter 2. Camera Cabling

Before users connect cables, make sure that all cables and the power adaptor are placed 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, which might lead to camera breakdown. Please follow the instructions below to complete camera connection.

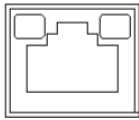
## 2.1 Connect Ethernet Cable

### Indoor Camera

Connect one end of the Ethernet cable to the RJ-45 connector of the indoor camera, and plug the other end to a PSE switch. Check the status of both power and network activity indicator LEDs. If either LED is unlit, please check the corresponding connection.



**NOTE:** Please use an Ethernet cable without the boot cover to connect the indoor camera. Otherwise, the dome cover cannot be installed.



Green Power LED lights up when the camera is powered up.

Orange Network LED (1) flashes when data is being transmitted over network, (2) lights up for good network connection.

### Outdoor Camera

Follow the instruction below to waterproof the connector of the RJ-45 cable.

Plug the Ethernet cable to the connector of the RJ-45 cable and coat the joint with silicone gel. Make sure there is no gap between the Ethernet cable and the connector; otherwise, waterproof function cannot be guaranteed.



## 2.2 Camera Installation

The following description demonstrates how to directly install the camera to the ceiling or to the wall.



**NOTE:** This camera must be installed by qualified personnel and the installation should conform to all local codes.

**Step 1:**

Loosen the two security screws on the camera with the supplied security torx and open the dome cover.



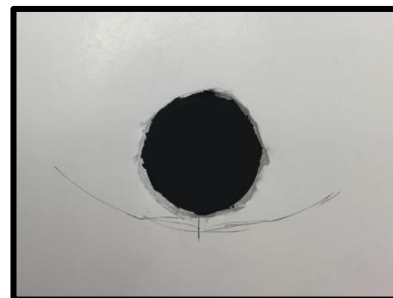
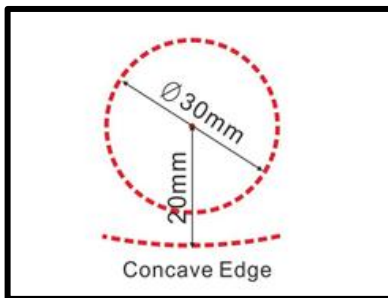
**Step 2:**

Place the camera at the installation location. Mark the position of the two screw holes indicated in the right figure on the ceiling/wall. Then draw a line along the concave edge of the camera to indicate the cable position.



**Step 3:**

On the ceiling/wall, draw a dot 20mm above the center of the marked concave edge (as the left figure below). Set the marked dot as the center, draw a cable entry hole with 30mm diameter (radius as 15mm) and drill the cable entry hole (as the right figure below).



**Step 4:**

Drill a hole slightly smaller than the supplied plastic screw anchor on each marked screw hole. Then insert the plastic screw anchors into the drilled holes.

**Step 5:**

Thread the cables through the cable entry hole. Match the two screw holes on the camera with the plastic screw anchors at the installation location. Fasten the camera with the supplied self-tapping screws.

**Step 6:**

Attach the dome cover to the camera and fasten the two security screws.

## Chapter 3. System Requirements

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

| Items                    | System Requirement  |
|--------------------------|---|
| <b>Personal Computer</b> | <b>Minimum :</b><br>1. Intel® Core™ i5-2430M @ 2.4 GHz<br>2. 4 GB RAM         |
|                          | <b>Recommended :</b><br>1. Intel® Core™ i7-870 @ 2.93 GHz<br>2. 8 GB RAM      |
| <b>Operating System</b>  | Windows 7 or later operating system   |
| <b>Web Browser</b>       | Microsoft Internet Explorer 11.0 (recommended)<br>Chrome<br>Firefox<br>Safari |
| <b>Network Card</b>      | 10Base-T (10 Mbps), 100Base-TX (100 Mbps) or 1000Base-T operation             |
| <b>Viewer</b>            | ActiveX control plug-in for Microsoft IE                                      |



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

## Chapter 4. Access Camera

For initial access to the IP camera, users can search the camera through the installer program: DeviceSearch.exe.

### **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 recommended that administrator's password be altered for the security concerns. Refer to the H.265 HDR IP Camera Menu Tree for further details.

### Installing DCViewer Software Online

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

If the web browser doesn't allow DCViewer 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.

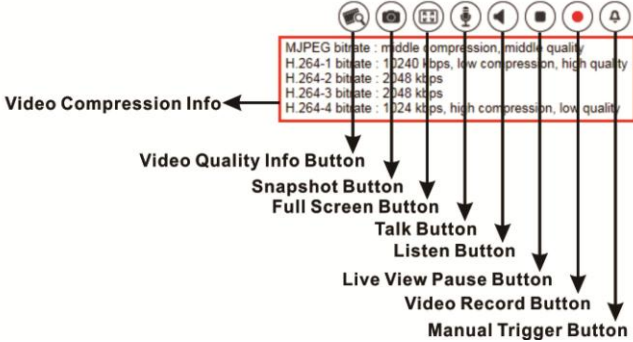
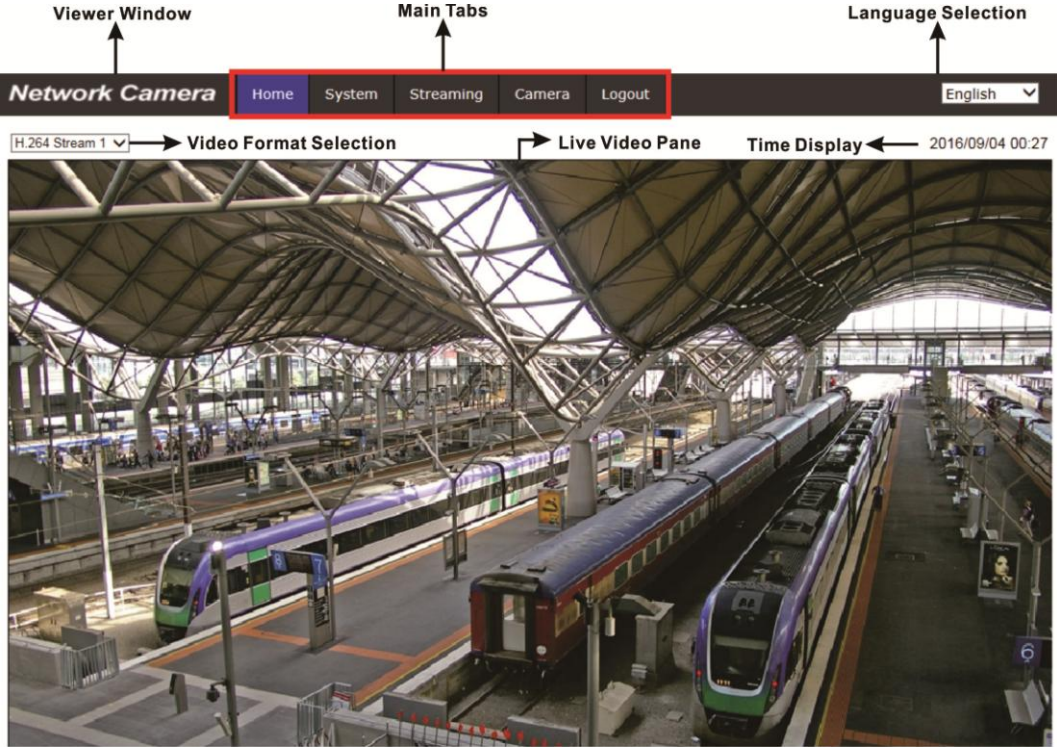
The download procedure of DCViewer software is specified as follows.

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

**Step 2:** The status bar will 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 IP camera will be able to correctly display as the figure below.



**NOTE:** Please refer to the H.265 HDR IP Camera Menu Tree for more button function details.



## Chapter 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 'Video Configuration' page for a 'Network Camera'. The 'Streaming' and 'Camera' menu items in the top navigation bar are highlighted with red boxes. The page is divided into a sidebar on the left and a main configuration area on the right. The sidebar contains the following items: Video Configuration (highlighted), Video Rotation, Video Text Overlay, Video ROI, Video ROI Encoding, Video OCX Protocol, Video Mask, and Audio. The main configuration area is titled 'Video Configuration' and contains four sections for Stream 1, Stream 2, Stream 3, and Stream 4. Stream 1 and Stream 2 are active, with the following settings: Encoding: Yes, Encode Type: H.264, Profile: Main profile, Framerate: 25, Bitrate: 4096, GOV Length: 50. Stream 1 has a Resolution of 2688 x 1512, while Stream 2 has a Resolution of 800 x 600. Stream 3 and Stream 4 are inactive, with Encoding set to No. At the bottom right of the configuration area, there are 'Save' and 'Reset' buttons.

The default value of video resolution is as below.

|    |  |
|----|--|
| 4M | H.265/H.264- 2688 x 1512 (30/25 fps) +<br>H.264- 800 x 600 (30/25 fps) |
|----|--|

## Chapter 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.

### **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 an existing configuration file to the camera, please first click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

# Chapter 7. Tech Support Information

This chapter will introduce how to delete previously-installed Viewer 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 first 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:** Click on the <Tools> tab on the menu bar and select <Internet Options>.

**Step 2:** Click on the <Delete> button under <Browsing history> section. Then click on the <Delete Files> button under the <Temporary Internet files> section.

**Step 3:** A confirmation window will pop up. Click on <Yes> 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)> and close the Security Settings 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.