



CI-218 / CI-303 / CI430 Network Camera

User Manual | English •

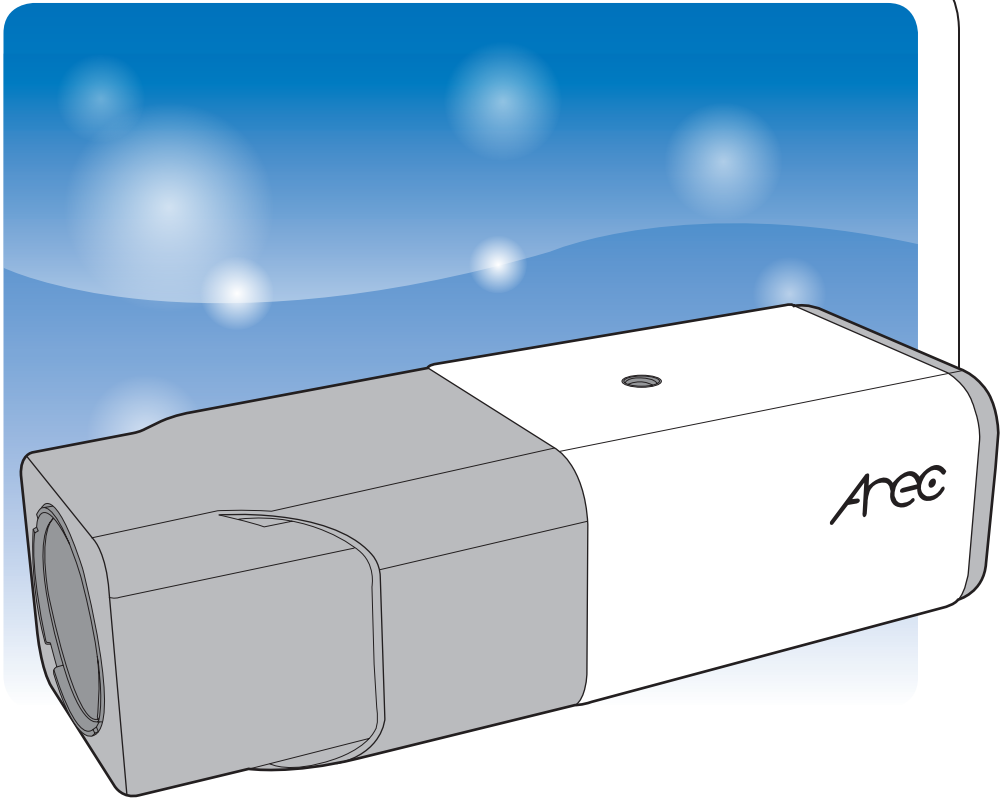


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1. Overview

The CI series Network Camera supports both H.264 and MJPEG standard. The Network Camera is capable of delivering Multi-streaming Full HD 1080P real-time video, and offers supreme image quality while keeping efficient and valuable network bandwidth for storage management.

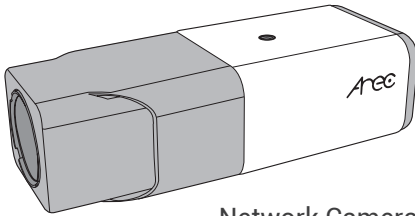
The camera also supports WDR function, which can provide better image quality under extreme light contrast scenario or changing lighting environment. Furthermore, the camera offers strengthened support for pro A/V application that demands consistent precision zoom control while high resolution and superior video quality are requisite.

1.1 Features

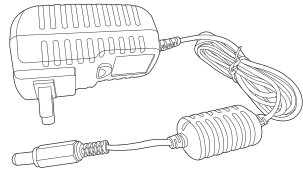
- Progressive CMOS Sensor Support up to 2M / 3M / 4M Resolution
- 3x / 18x/ 30x Optical Zoom with Auto Focus
- Quad Streams support
- H.264 Baseline / Main Profile / High Profile and MJPEG Codec Support
- Multi-language Support
- Smart Event Function-Motion Detection / Network Failure Detection / Tampering Alarm / Periodical Event / Manual Trigger / Audio Detection
- 3D Noise Reduction / 2D Noise Reduction
- Day/Night (ICR)
- Auto Iris Lens Support
- Text Overlay and Privacy Masks
- microSD Support
- BNC Analog Output
- RS-485 Support
- ONVIF Support

1.2 Package Contents

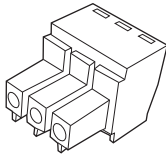
Please check the package containing the following items listed below.



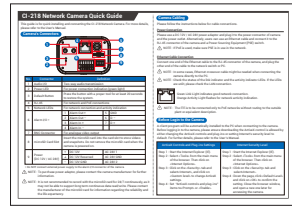
Network Camera



Power adapter



Power Terminal Block
(vary depending on the camera model)

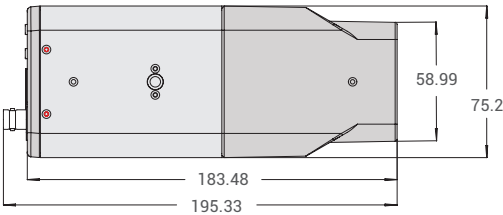


Quick Guide

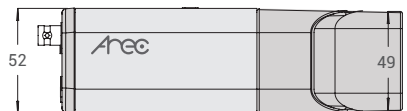
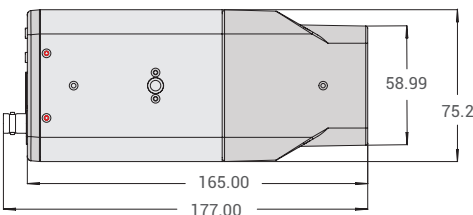
1.3 Dimensions

The dimensions of the camera are shown below.

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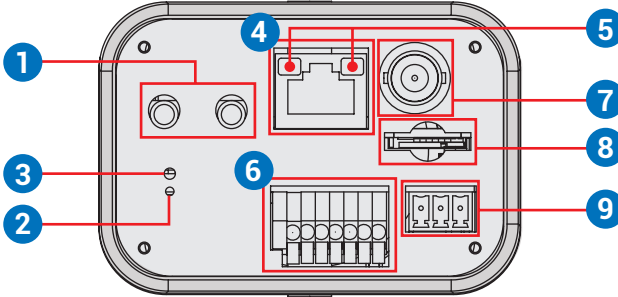
CI-303



1.4 Connectors

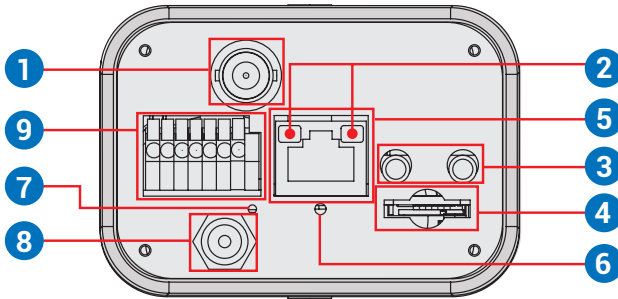
The diagram below shows the camera's reset button and various connectors. Definition for each connector will be given as follows.

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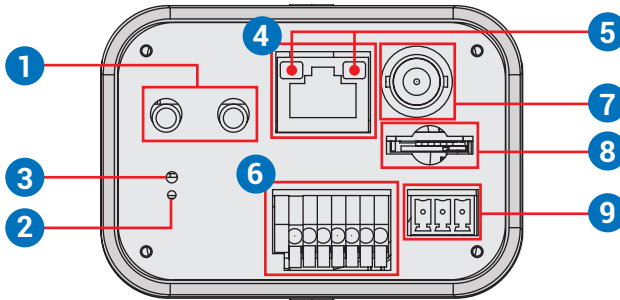
No.	Connector	Definition
1	Audio I/O	Two-way audio transmission
2	Power LED	For power connection indication (green light)
3	Default Button	Press the button with a proper tool for at least 20 seconds to restore the system.
4	RJ-45	For network and PoE connections
5	Network LEDs	For network connection and activity indication
6	Alarm I/O *	1 Alarm Out + 5 GND
		2 Alarm Out - 6 D -
		3 Alarm In + 7 D +
		4 Alarm In -
7	BNC Connector	For analogue video output
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.
9	Power (DC 12V / AC 24V)	+ DC 12V AC 24V 1
		↻ DC 12V Reserved AC 24V GND
		- DC 12V GND AC 24V 2

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

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No.	Connector	Definition
1	BNC	For analogue video output
2	Network LEDs	For network connection and activity indication
3	Audio I/O	Two-way audio transmission
4	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.
5	PoE Network (RJ-45)	For network and PoE connections
6	Default Button	Press the button with a proper tool for at least 20 seconds to restore the system.
7	Power LED	For power connection indication (green light)
8	Power (DC 12V)	For power connection. If users are to use with AC 24V power adaptor, please first connect the supplied power switch to the power connector.
9	Alarm I/O *	1 Alarm In 2 + 5 Alarm Out +
		2 Alarm In - 6 D +
		3 Alarm In 1 + 7 D -
		4 Alarm Out -

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

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No.	Connector	Definition
1	Audio I/O	Two-way audio transmission
2	Power LED	For power connection indication (green light)
3	Default Button	Press the button with a proper tool for at least 20 seconds to restore the system.
4	RJ-45	For network and PoE connections
5	Network LEDs	For network connection and activity indication
6	Alarm I/O *	1 Alarm Out + 5 GND
		2 Alarm Out - 6 D -
		3 Alarm In + 7 D +
		4 Alarm In -
7	BNC Connector	For analogue video output
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.
9	Power (DC 12V / AC 24V)	+ DC 12V + AC 24V 1
		↕ DC 12V GND AC 24V GND
		- DC 12V - AC 24V 2

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


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.

2. Camera Cabling

Please follow the instructions below to complete the camera connection.


2.1 Power Connection

Please refer to section Connectors. Alternatively, users can power up the camera by PoE if a Power Sourcing Equipment (PSE) switch is available. Refer to the section below for Ethernet cable connection.

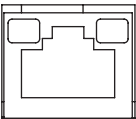
 **NOTE:** If PoE is used, make sure PSE is in use in the network.

2.2 Ethernet Cable Connection

To have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the camera, and the other end of the cable to the network switch or PC. The RJ-45 port networks without routing to the outside plant.

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

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



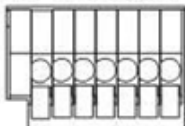
Green Link Light indicates good network connection. Orange Activity Light flashes for network activity indication.

2.3 Alarm I/O Connection

The camera equips one alarm input and one relay output for alarm application. Refer to alarm pin definition below to connect alarm devices to the camera if needed.

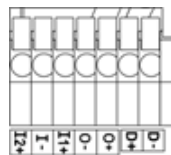
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I/O 1 2 3 4 5 6 7



1. Alarm Out +
2. Alarm Out -
3. Alarm In +
4. Alarm In -

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1. Alarm In 2 +
2. Alarm In -
3. Alarm In 1 +
4. Alarm Out -
5. Alarm Out +

3. System Requirements

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


Items	System Requirement
Personal Computer	Minimum : 1. Intel® Core™ i5-2430M @ 2.4 GHz 2. 4 GB RAM
	Recommended : 1. Intel® Core™ i7-870 @ 2.93 GHz 2. 8 GB RAM
Operating System	Windows VISTA / Windows XP / Windows 7
Web Browser	Microsoft Internet Explorer 7.0 or later (recommended) Firefox (32-bit) Safari
Network Card	10Base-T (10 Mbps), 100Base-TX (100 Mbps) or 1000Base-T operation
Viewer	ActiveX control plug-in for Microsoft IE Apple QuickTime 7.7.7 or before for Firefox

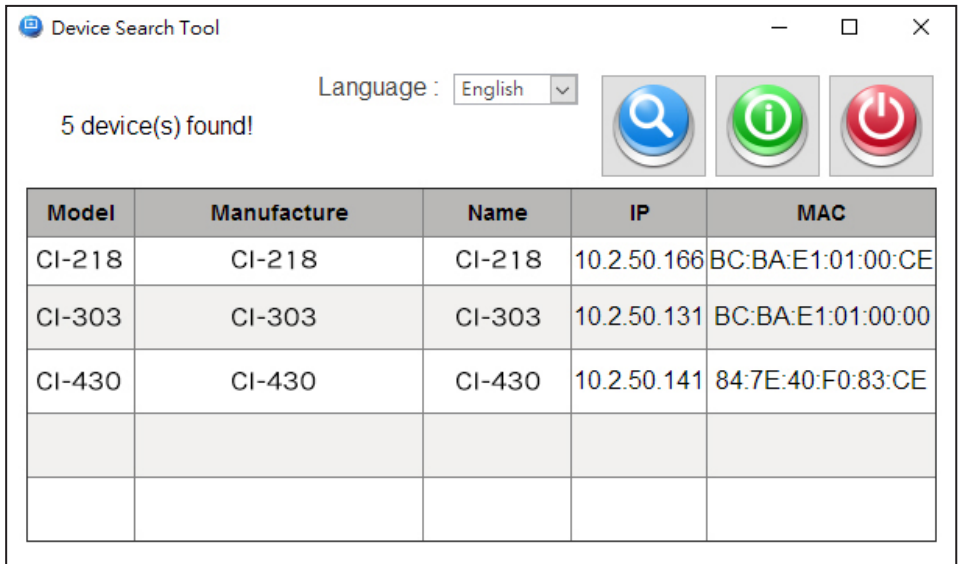


NOTE: The ITE is to be connected only to PoE networks without routing to the outside plant or equivalent description.

4. Access Camera

The default network setting of the camera is DHCP, which means IP is assigned by a router or any DHCP server. To log in to the administration web, please connect the camera and your PC / Notebook or a DHCP server. Follow below steps to access the camera for the first time.

- Run the "Device Search Tool" utility, and click  button.
- The tool should find the network camera and show detailed information. Double click on the founded camera.
- An access window will pop-up and ask for user name and password.



The screenshot shows the "Device Search Tool" window. At the top, it says "Language : English" with a dropdown arrow. Below that, it says "5 device(s) found!". To the right of the text are three icons: a magnifying glass (search), an information icon (i), and a power button icon. Below these is a table with the following data:

Model	Manufacture	Name	IP	MAC
CI-218	CI-218	CI-218	10.2.50.166	BC:BA:E1:01:00:CE
CI-303	CI-303	CI-303	10.2.50.131	BC:BA:E1:01:00:00
CI-430	CI-430	CI-430	10.2.50.141	84:7E:40:F0:83:CE

In the case where the DHCP server is unavailable

If no IP is assigned due to a DHCP server failure, or simply because the camera is not connected to a DHCP server, the Network Camera provides an alternate IP address: 192.168.11.202

Therefore, to access the camera for the first time, please set the IP address of the PC as: 192.168.11.XXX; for example:

IP Address: 192.168.11.100

Subnet Mask: 255.255.255.0

Key in the camera's IP address in the URL bar of the web browser window and hit on "Enter". An access window will pop-up and ask for user name and password.

Login ID and Password

Enter the default user name and password in the dialogue. Note that user name is case sensitive

Login ID	Password
admin	admin



NOTE: ID and password are case sensitive.



NOTE: It is strongly advised that administrator's password be altered for the security concerns.

Installing DCViewer Software Online

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

The download procedure of DCViewer software is specified as follows.

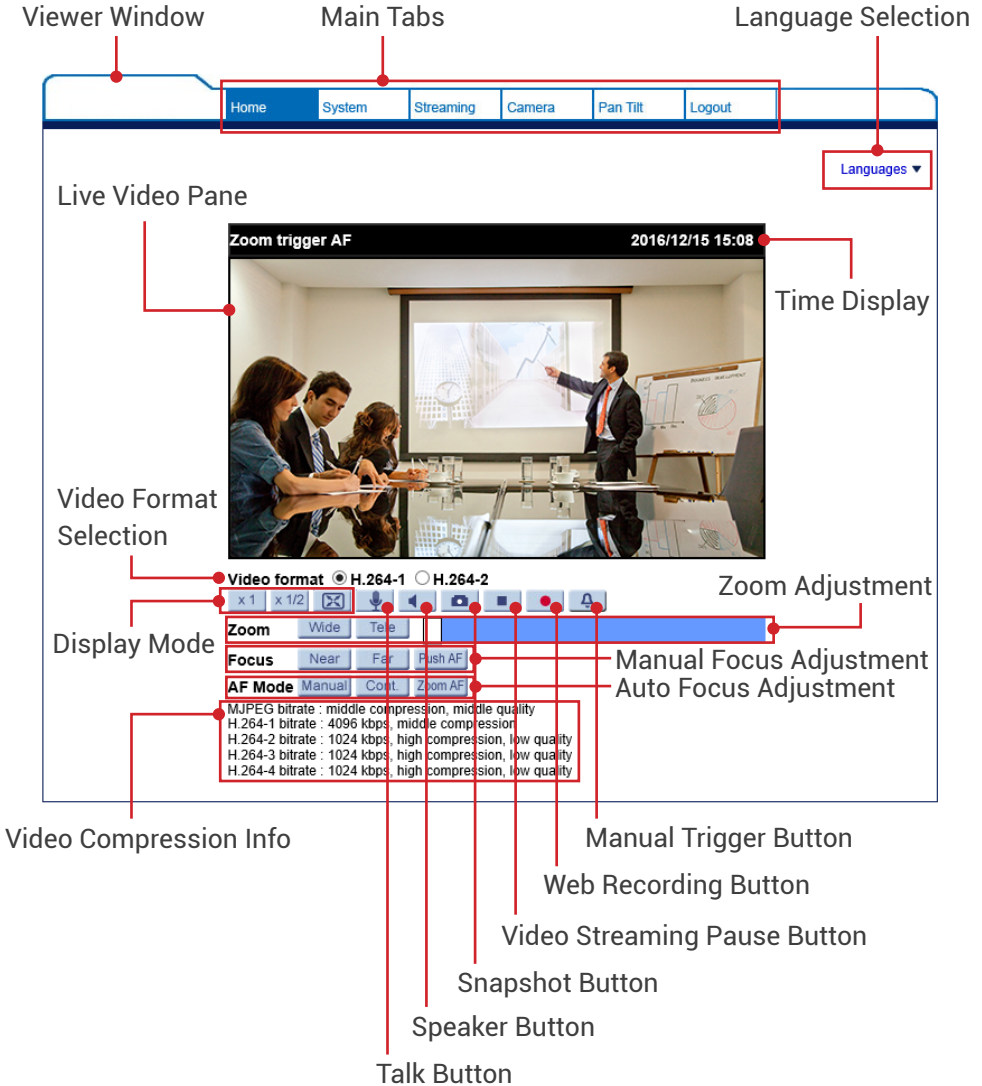
Step 1: In the DCViewer installation window, click on <Next> to start installation.

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 Network Camera's Home page will be able to correctly display as the figure below.

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Viewer Window

Main Tabs

Language Selection

The screenshot shows the Network Camera viewer interface. At the top, there are navigation tabs: Home, System, Streaming, Camera, and Logout. A language selection dropdown is set to English. Below the tabs, there is a video format selection dropdown (H.264 Stream 1) and a time display (2015/12/23 15:49). The main area is a live video pane showing a woman writing mathematical equations on a chalkboard. Below the video pane, there are control buttons for ZOOM (WIDE, TELE, 1x zoom, x1) and FOCUS (NEAR, FAR, AUTO, MANUAL). To the right of the video pane, there is a video quality info button and a row of icons for Full Screen, Talk, Listen, Snapshot, Live View Pause, Video Record, and Manual Trigger. A detailed video compression info panel is also visible, showing bitrates and compression settings for H.264-1, H.264-2, and H.264-3.

Video Format Selection

Time Display 2015/12/23 15:49

Live Video Pane

Video Compression Info

 MJPEG bitrate : middle compression, middle quality
 H.264-1 bitrate : 496 kbps, middle compression
 H.264-2 bitrate : 348 kbps
 H.264-3 bitrate : 248 kbps
 H.264-4 bitrate : 174 kbps

Manual Focus Adjustment

Video Quality Info Button

Zoom Adjustment

Full Screen Button

Talk Button

Listen Button

Snapshot Button

Live View Pause Button

Video Record Button

Manual Trigger Button

Image 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.

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 configuration interface for a Megapixel Network Camera. The top navigation bar includes 'Home', 'System', 'Streaming' (highlighted with a red box), 'Camera', and 'Logout'. On the left sidebar, 'Video Format' is highlighted with a red box. The main content area is titled 'Video Format' and contains the following settings:

- Video Resolution :** H.264 + H.264 + H.264 + H.264
- Format 1 :** 1920 x 1080 (30 fps) | H-264-1
- Format 2 :** 1280 x 1024 (15 fps) | H-264-2
- Format 3 :** 1280 x 720 (30 fps) | H-264-3
- Format 4 :** 720 x 480 (30 fps) | H-264-4
- Save** button

The screenshot shows the configuration interface for a Network Camera. The top navigation bar includes 'Home', 'System', 'Streaming' (highlighted with a red box), 'Camera', and 'Logout'. On the left sidebar, 'Video Format' is highlighted with a red box. The main content area is titled 'Video Format' and contains the following settings:

- Video Resolution :** H.264 + H.264
- Format 1 :** 3840 x 2160 (20 fps) | H-264-1
- Format 2 :** 720 x 480 (20 fps) | H-264-2
- BNC support :** Yes
- Save** button

The default values of video resolution are as below

2M	H.264- 1920 x 1080 (25/30 fps) +
Real time	H.264- 720 x 576 (25 fps) / H.264- 720 x 480 (30 fps)

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 Network 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 copy an existing configuration file to the Network Camera, please first click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

7. Delete the Existing DC Viewer

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 Network 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 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 Network 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 Network Camera.

Appendix: Video Resolution

The suggested values of video resolution of the Network Camera are as below:

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1.3M	H.264- 1280 x 720 (25/30 fps) + H.264- 1280 x 720 (25/30 fps)
2M	H.264- 1920 x 1080 (25/30 fps) + H.264- 720 x 576 (25 fps) / H.264- 720 x 480 (30 fps)

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2M	Normal Mode	H.264-1920 x 1080 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode	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 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode	H.264- 1920 x 1080 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
4M	Normal Mode	H.264- 2304 x 1296 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode	H.264- 1920 x 1080 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)

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2M	Normal Mode	H.264-1920 x 1080 (30/25 fps) + H.264- 720 x 480 (30 fps) / 720 x 576 (25 fps)
	HDR Mode	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 (30/25 fps) + H.264- 720 x 480 (30 fps) / 768 x 576 (25 fps)
	HDR Mode	H.264- 2048 x 1536 (30/25 fps) + H.264- 720 x 480 (15 fps) / 768 x 576 (15 fps)
4M	Normal Mode	H.264- 2688 x 1512 (30/25 fps) + H.264- 720 x 480 (30 fps) / 768 x 576 (25 fps)
	HDR Mode	H.264- 2560 x 1440 (15 fps) + H.264- 1280 x 720 (15 fps)



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