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TAURUS DX 2 SERIES

Low Light Box Camera

User's Manual

Ver. 2.0

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1. Overview

Full HD Multi-Streams Ultra-WDR Box IP Camera features multiple streams, and supports up to 1080p @ 60 fps. Ultra Dynamic Range offers excellent images from combined two/four shutter speeds exposed pictures under extreme high contrast environments.

Besides excellent wide dynamic range performance, with latest CMOS sensor, the camera is also capable of handling the surveillance in nearly total darkness environments. Combining the advantages of shutter WDR and low light ability, the camera is especially ideal for traffic application and entrance surveillance.
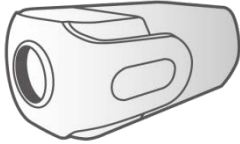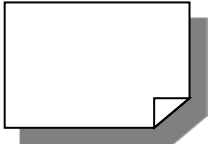
Moreover, Full HD Multi-Streams Ultra-WDR Box IP Camera is built-in with Auto Back Focus (ABF) function. User can simply adjust focus by clicking control buttons on webpage that makes focus adjustment easier and also makes remote focus tuning available after installation.

1.1 Features

- 1.3 MP / 2MP Sony Progressive Scan CMOS Sensor
- Quad Streams Compression- H.264 Baseline / Main / High Profile + MJPEG
- Quad Streams Support
- Dual Streams, Full HD 1080P @ 60fps + D1 @ 30fps
- Smart Event Function-
  Motion Detection / Network Failure Detection / Tampering Alarm / Periodical Event / Manual Trigger / Face Detection / Audio Detection
- Ultra Dynamic Range
- Auto Back Focus (ABF)*
- Text Overlay and Privacy Masks
- microSD Card Support
- BNC Analog Output
- Triple Power Support- PoE / DC 12V / AC 24V*
- RS-485 Support*
- ONVIF Profile S Conformance

(*) Optional

1.2　Package Contents

Please check the package containing the following items listed below.

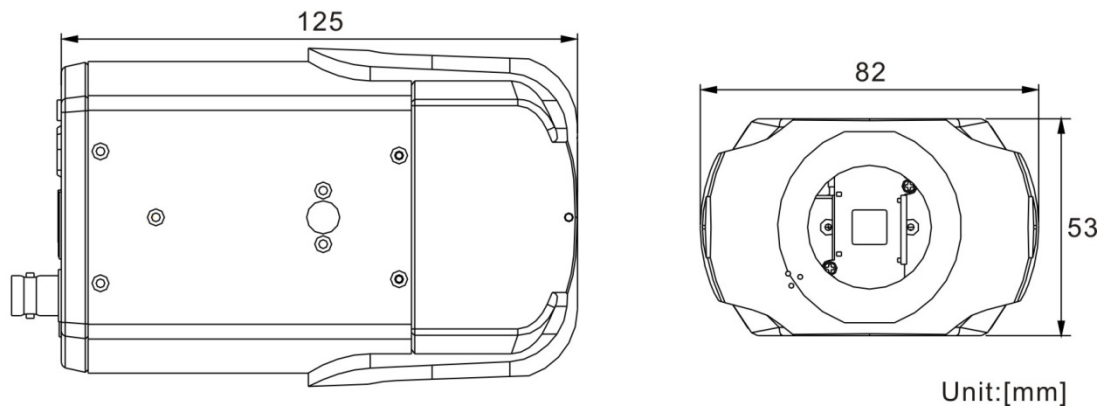| Full HD Multi-Streams Ultra-WDR Box IP Camera	
Back Focus Adjuster*	Quick Guide

*For Non-ABF models.

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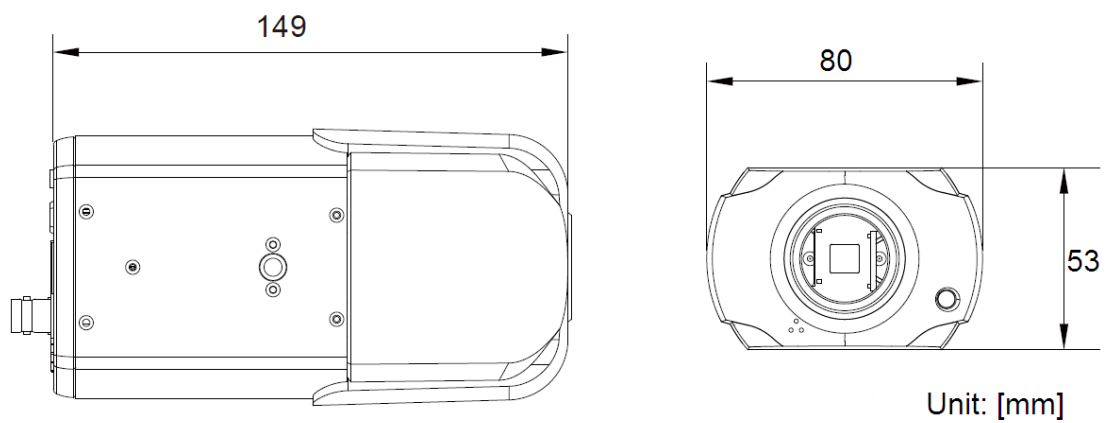
1.3   Dimensions

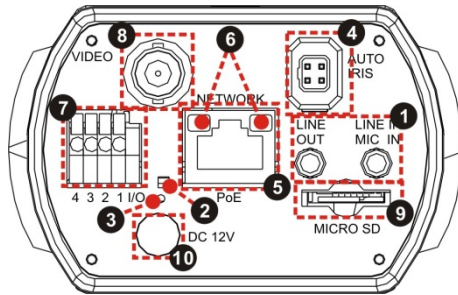The IP camera's dimensions are shown below.

Non-ABF Models

125

82

53

Unit:[mm]

ABF Models

149

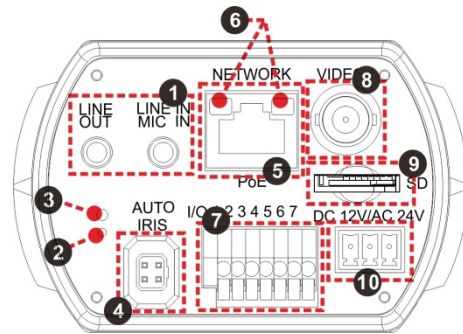80

53

Unit: [mm]

1.4   Connectors

The diagram below shows the various connectors of the camera. Definition for each connector is given as follows.

DC 12V / PoE   **DC 12V / AC 24V / PoE**

| No.	Item	Pin	Definition		Remarks
1	**Audio I/O (Line In/Out)**	-	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	**Auto Iris**	-	For auto iris lens connection		
5	**RJ-45**	-	For network and PoE connections		
6	**Network LEDs**	-	For network connection and activity indication		
7	**Alarm I/O ***	1	Alarm Out +		Alarm connection
		2	Alarm Out –		
		3	Alarm In +		
		4	Alarm In –		
		5	GND		Ground connection
		6	D –		RS-485 connection
		7	D +		
8	**BNC**	-	For analogue video output		
9	**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.		
10	**Power (DC12V / AC 24V) (AC 24V Model)**	+	DC 12V	AC 24V 1	Power connection
		⏚	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.

⚠ **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.

1.4.1 Light Sensor (ABF Models Only)

For ABF models, a light sensor is located at the front of the cameras. The location and definition of the light sensor is as below.
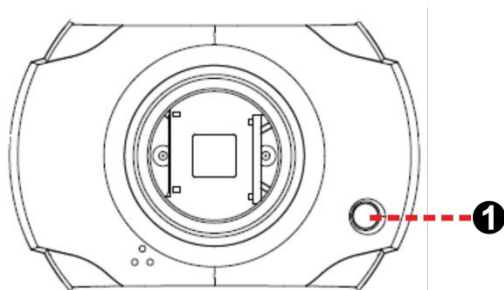
No.	Item	Definition
1	Light Sensor	Ambient light detection for day/night switching function.

2. Camera Cabling

Please follow the instructions below to complete IP camera installation.

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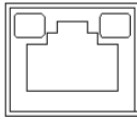
Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.
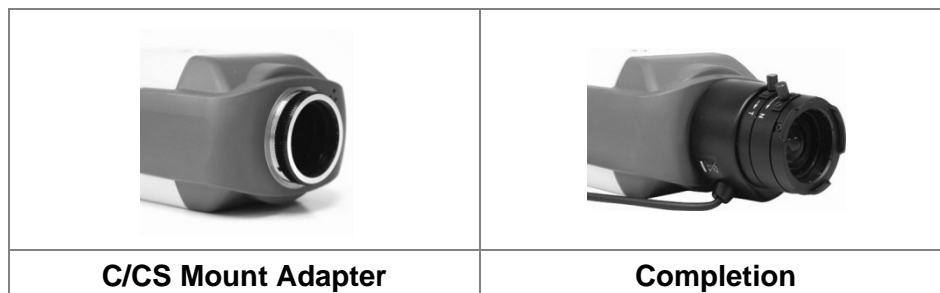
2.3   Lens Mounting

Follow the steps below to mount the C/CS Mount Lens to the camera.

Step 1: Remove the plastic cover of the camera.

Step 2: Remove the dustproof protective film from the CMOS image sensor.

**Step 3:** For Non-ABF models, mount the C/CS Mount Adapter to the camera.

Step 4: Attach the C/CS Mount Lens to the adapter.

C/CS Mount Adapter	Completion

2.4   Alarm I/O Connection

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

DC 12V / PoE

DC 12V / AC 24V / PoE

I/O 1 2 3 4 5 6 7

4 3 2 1 I/O
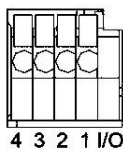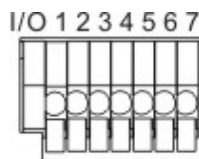
1. Alarm Out +
2. Alarm In −
3. Alarm Out +
4. Alarm In −

2.5   RS-485 Connection (DC12V/AC24V/PoE Models)

The RS-485 connector is the interface for connecting with the pan & tilt positioning system.

/O 1 2 3 4 5 6 7

6. D −
7. D +

3.   System Requirements

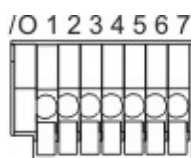To perform the IP camera via web browser, please ensure the PC is in good network connection, and meet system requirements as described below.

Items	System Requirement
Personal Computer	**Minimum :** 1. Intel® CoreTM i5-2430M @ 2.4 GHz 2. 4 GB RAM
	Recommended : 1. Intel® CoreTM 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

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 advised that administrator's password be altered for the security concerns. Refer to the <u>Full HD Multi-Streams Ultra-WDR IP Camera Menu Tree</u> 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 <u>Setup Internet Security</u>) 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.
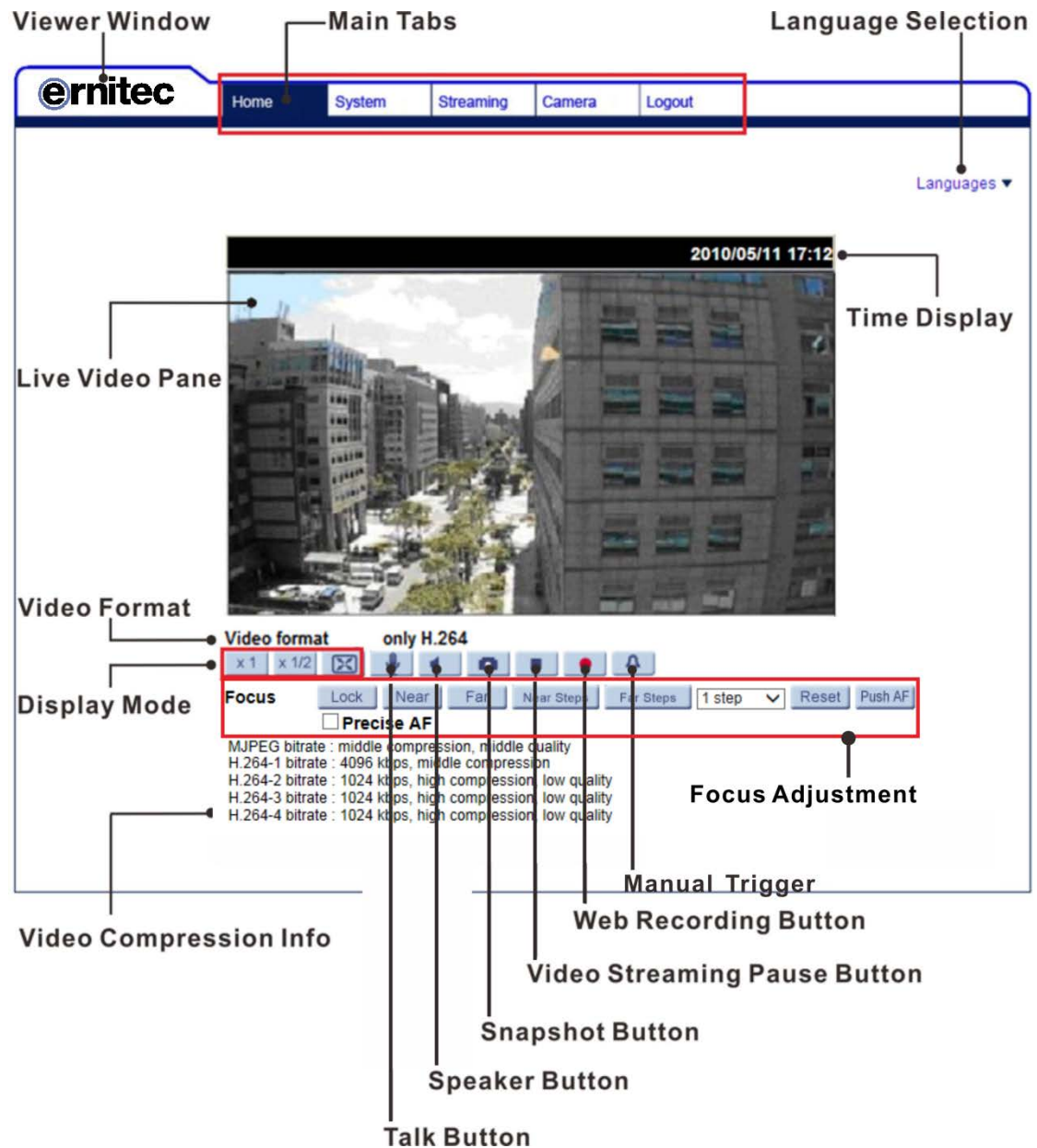
Step 3: Click on <Finish> to close the DCViewer installation page.

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

Non-ABF Models
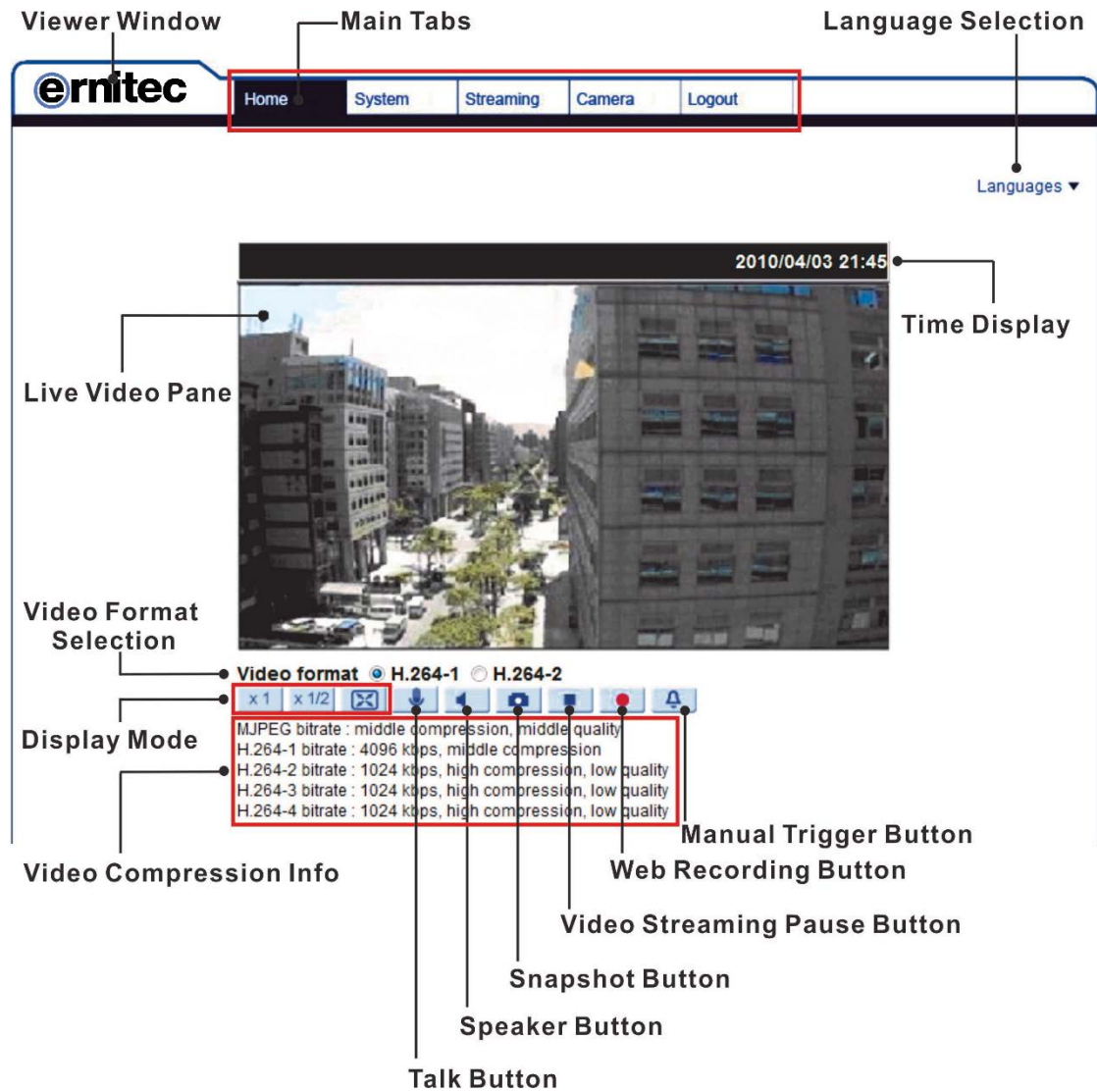
ABF Models

NOTE: For more details about the function buttons on the Home page, please refer to the Full HD Multi-Streams Ultra-WDR IP Camera Menu Tree.

4.1   Lock ABF Function (ABF Models Only)

Lock function is to lock the ABF function of the camera after focus is adjusted to the best position. This function is to prevent the camera from being out of focus when the camera is moved afterwards or is accidentally adjusted locally or remotely via NVR/VMS.
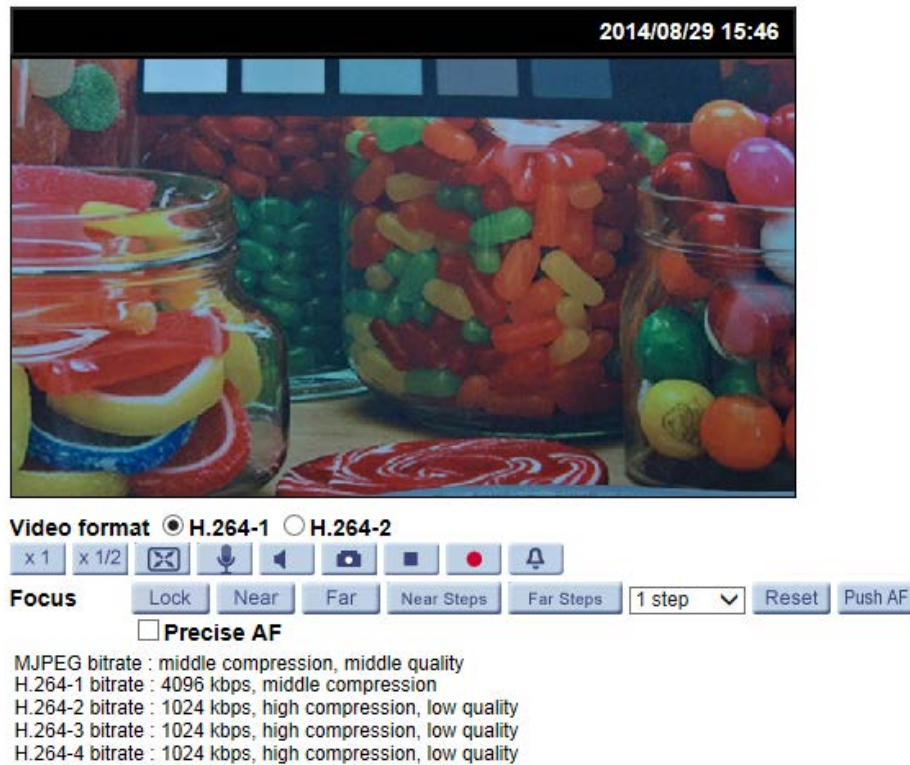
Step 1:   Once the camera is powered on, click on < Reset >.
Step 2:   Manually adjust the lens to the approximate zoom and focus position.
Step 3:   Check the <Precise AF> box and click < Push AF >.
Step 4:   Click on < Lock > to lock the current focus position of the camera.

Note that all function items related to focus cannot be accessed.   Click < Lock > to disable this function and adjust the focus of the camera.

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 default values of video resolution are as below.

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 480 (25 fps) / 720 x 576 (30 fps)
	H.264- 1920 x 1080 (25/30 fps) + H.264- 640 x 480 (25/30 fps)

6. Configuration File 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 copy 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. In addition, how to adjust the back focus of the cameras will also be described here.

⚠ **NOTE:** Adjusting the back focus of the camera is only available for **Non-ABF** models.

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 the 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.

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 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. Bi**nary** 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.

7.3   Back Focus Adjustment (Non-ABF Models Only)

This section is for **Non-ABF** models only. Follow the instructions below to adjust the back focus of the camera.

When to adjust back focus

Back Focus refers to the distance from the rear lens element to the camera focal plane. In most cases, it is required to adjust back focus only when the camera's lens cannot hold focus throughout its zoom range.

Tools required

Tools required when carrying out back focus adjustment include:
1. Back focus adjuster (in the IP camera's package)
2. Test chart / contrasting object

How to adjust back focus

Step 1: Set the camera on a stable mount, and place the test chart or the contrasting object at a far location (at least 10 meters).

Step 2: Adjust the focus to infinite far (∞) position.

Step 3: Turn the zoom adjustment bar to the extreme telephoto position, and then focus on the test chart or the contrasting object.

Step 4: Turn the zoom adjustment bar to wide-angle position, and then focus on the test chart or the contrasting object.

Step 5: Loosen the back focus ring's retaining screw with the supplied adjuster, and adjust the back focus ring for sharp image.
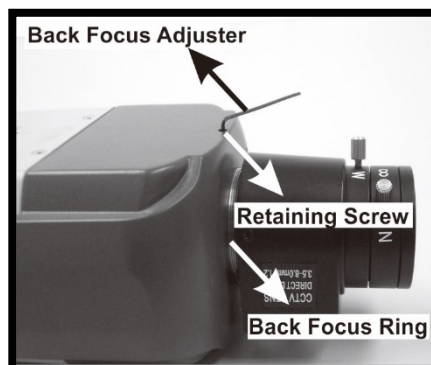
Step 6: Repeat **Step 3 to Step 5** and adjust the back focus ring until focus can be held throughout the zoom range.

Step 7: Tighten the retaining screw to fasten the back focus ring.