



# Full HD Speed Dome IP Camera

## User's Manual

Indoor / Outdoor

Ver. 1.3

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# 1. Overview

The Full HD Ultra-WDR Speed Dome IP Camera transmits digital video and audio data using wire connection. Live video can be monitored and recorded from window-based computer via network.

The video encoder supports Real-time H.264 Full HD resolution. Simultaneous Quad Codecs, H.264 Baseline / Main / High Profile, MJPEG, are available for various network applications via speeding or limited bandwidth. Better image quality and high resolution are delivered by IP support. It eliminates the “combing” effect due to scene change and performs more stabilized image.

With IP solution, multiple and authorized users can view the immediate image from any location through network even using a standard web browser. It enables users to access and remote the camera without at specific locations.

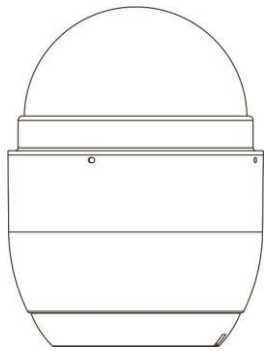
## 1.1 Features

- Sony Progressive Scan CMOS Sensor
- 18x / 20x / 30x Optical Zoom
- 12x Digital Zoom
- Ultra Wide Dynamic Range (>96dB)
- Dual Streams, Full HD 1080P Real-time + D1 Real-time
- Noise Reduction
- Electronic Image Stabilizer
- IP66 International (Outdoor Models Only)
- ONVIF Support

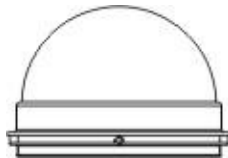
## 1.2 Package Contents

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.

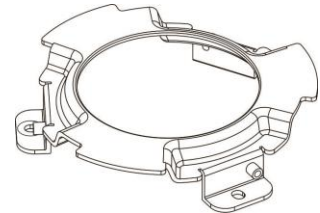
### Indoor



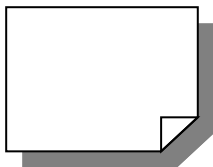
Full HD Speed Dome  
IP Camera



Optical Cover



Hard Ceiling Mount  
M4 Screw (x5)  
Plastic Anchors (x5)

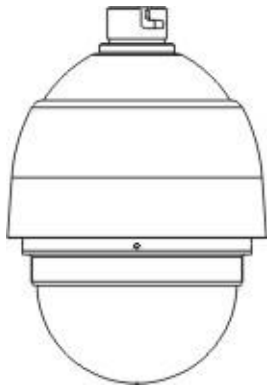


Quick Guide



CD: Operation Manuals

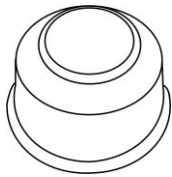
## Outdoor



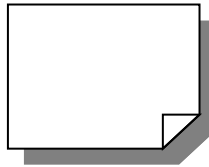
Full HD Speed Dome  
IP Camera  
with Outdoor Mounting Kit



M3 Standard Screw (x1)  
M3 Security Screw (x1)\*  
M5 Standard Screw (x1)  
M5 Security Screw (x1)\*



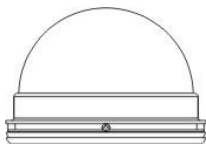
Waterproof Rubber



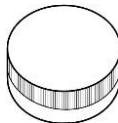
Quick Guide



CD: Operation Manuals



Optical Cover



Lubricant

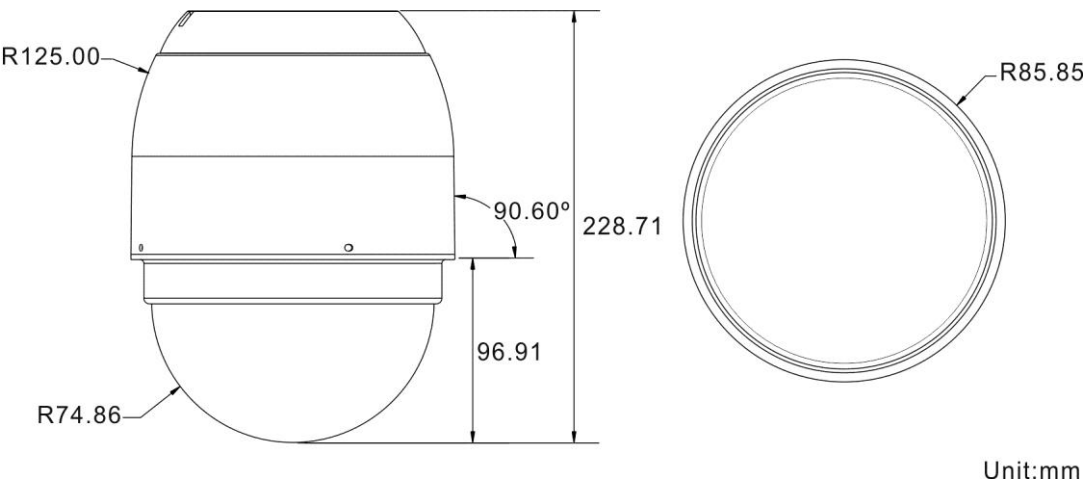


Security Torx\*

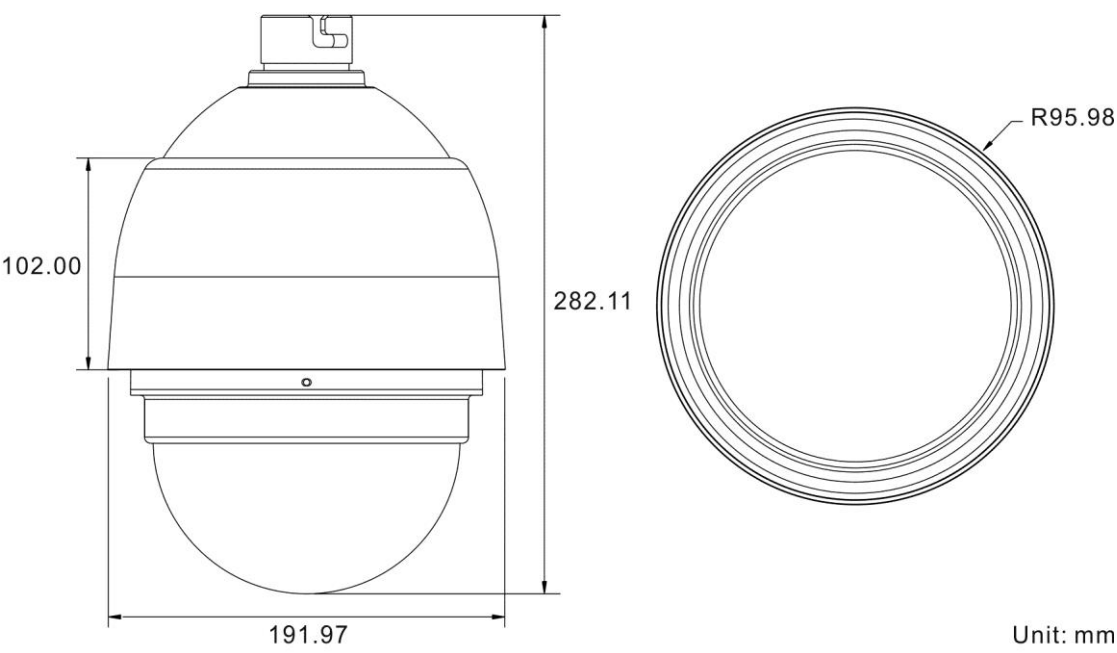
\*For vandal proof cover only.

# 1.3 Dimensions

## Indoor

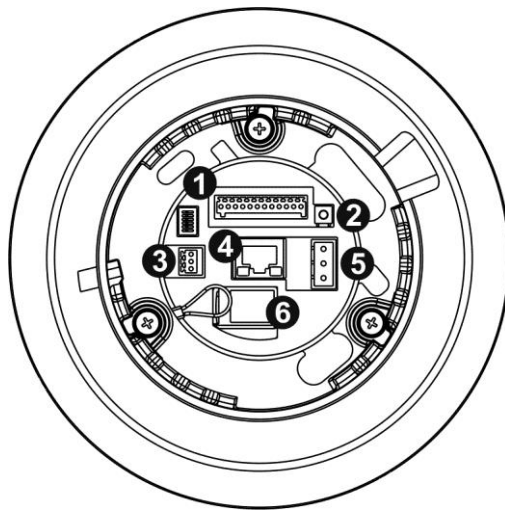


## Outdoor

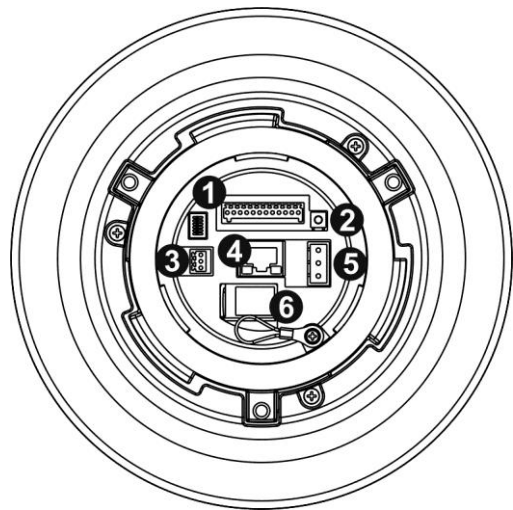


## 1.4 Connectors

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



Indoor



Outdoor

Pin	Connector	Definition
1	Alarm I/O	Alarm I/O connection
2	Default Button	Press the button with one figure for at least 20 seconds to restore the system.
3	Audio I/O	Audio I/O connection
4	RJ-45	For network and PoE+ connections
5	Power (AC 24V)	Power connection
6	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:** 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 reliability and life expectancy.

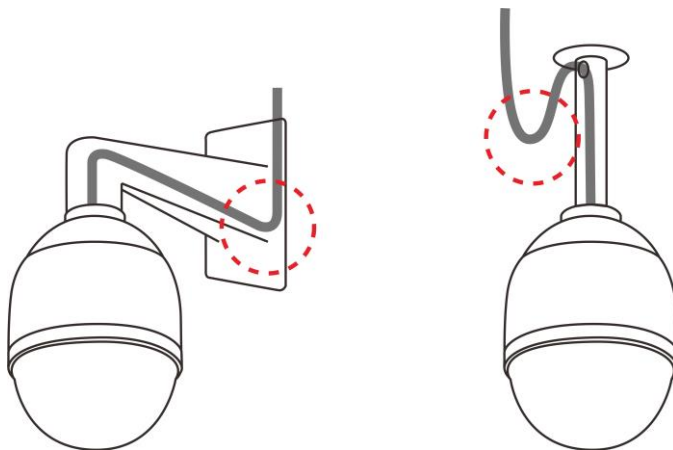
## 2. Camera Cabling

For indoor models, please refer to the following sections to connect cables. For outdoor models, please read the notice below first, and then refer to the following sections for cable connections.

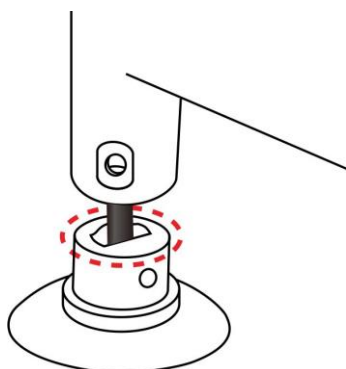
### **Notice for Outdoor Models**

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.

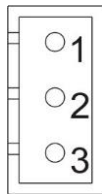


- The cable entry hole of the outdoor mounting kit (indicated in the figure below) needs to be sealed to avoid water from entering the camera.



## 2.1 Power Connection

To power up the camera, connect the AC 24V power adaptor to the power connector of the camera and the power outlet. Please refer to the diagram and the pin definition table below for connection. Alternatively, users can use High Power over Ethernet (PoE+) to power up the camera if an IEEE 802.3at 60W PoE+ switch is available. Refer to the section below for Ethernet cable connection.



Pin	Definition
1	AC 24V 1
2	GND
3	AC 24V 2

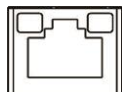
## 2.2 Ethernet Cable Connection

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 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.

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

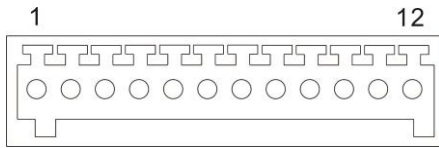


Green Link Light indicates good network connection.

Orange Activity Light flashes for network activity indication.

## 2.3 Alarm I/O Connection

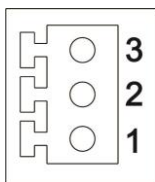
The camera supports 4 digital alarm inputs and 2 digital alarm outputs. Please refer to the diagram and the pin definition tables below for alarm I/O connection.



Pin	Definition	Pin	Definition
1	Alarm Out NO 1	7	Alarm Out COM 2
2	Alarm Out NC 1	8	GND
3	Alarm Out COM 1	9	Alarm In 4
4	GND	10	Alarm In 3
5	Alarm Out NO 2	11	Alarm In 2
6	Alarm Out NC 2	12	Alarm In 1

## 2.4 Audio I/O Connection

Please refer to the diagram and the pin definition table below for audio I/O connection.



Pin	Definition
1	Audio Out
2	GND
3	Audio In

### 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	Minimum Requirement
<b>Personal Computer</b>	1. Intel® Pentium® IV, 3 GHz or higher, Intel® Core2 Duo, 2 GHz or higher 2. 1 GB RAM or more 3. AGP graphics card 64 MB RAM, DirectDraw
<b>Operating System</b>	Windows VISTA / Windows XP / Windows 7
<b>Web Browser</b>	Internet Explorer 6.0 or later, Firefox, Chrome, Safari
<b>Network Card</b>	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation
<b>Viewer</b>	ActiveX control plug-in for Microsoft IE

## 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 [Full HD Speed Dome IP Camera Menu Tree](#) in the supplied CD for further details.

### **Installing DC Viewer Software Online**

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

If the web browser doesn't allow DC Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (refer to [Appendix C: 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.

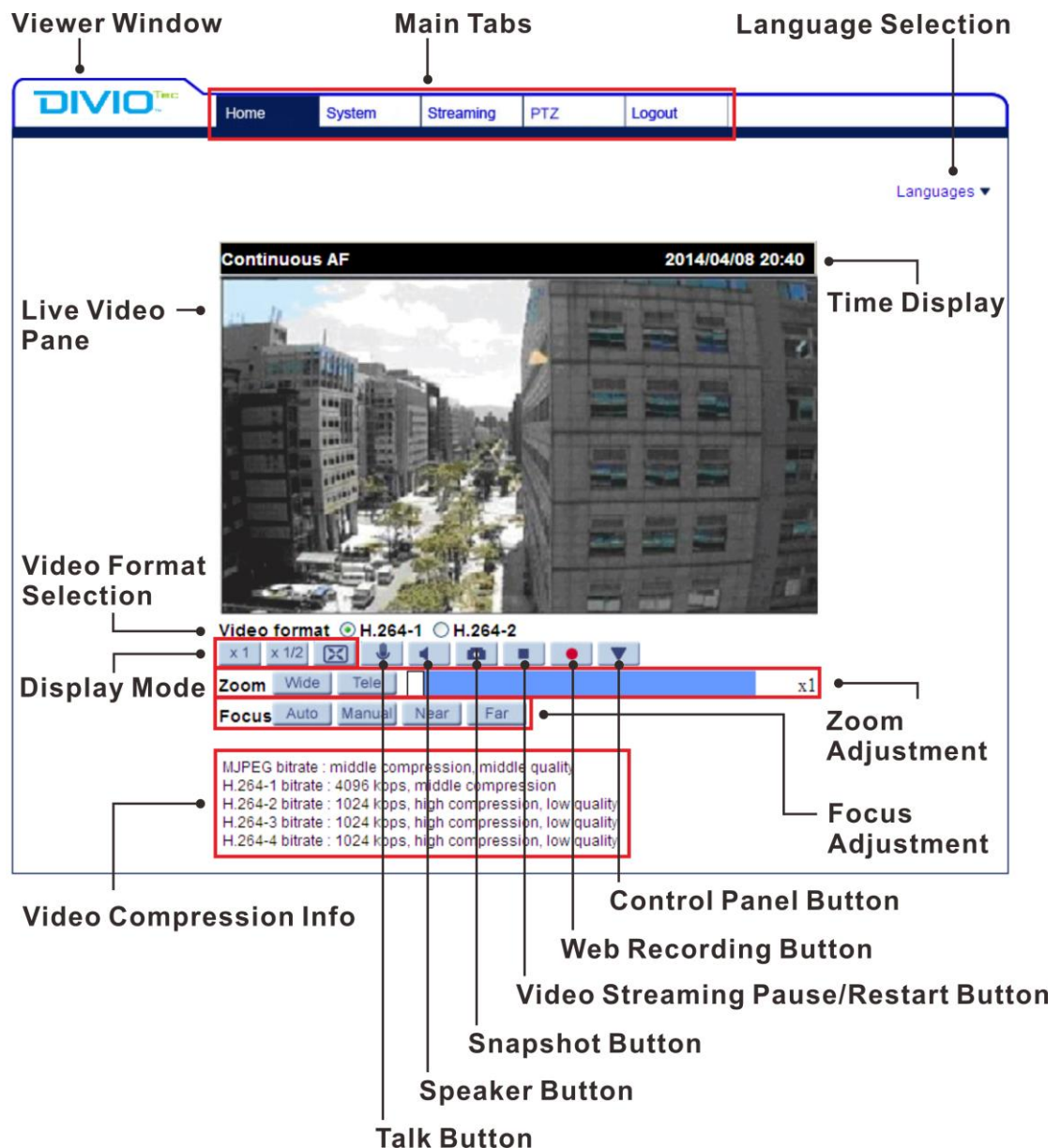
The download procedure of DC Viewer software is specified as follows.

**Step 1:** In the DC Viewer 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 DC Viewer installation page.

Once the DC 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 Full HD Speed Dome IP 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**.

**DIVIO<sup>TM</sup> Tech** Home System **Streaming** PTZ Logout

**Video Format**

**Video Resolution :**

H.264 + H.264

H.264-1 format : 1920 x 1080 (30 fps)

H.264-2 format : 720 x 480 (30 fps)

BNC support : N/A

Save

**Note :**  
Image attachment by FTP or E-mail will be available only while MJPEG streaming is selected.

**Text Overlay Settings :**

☐ Include date ☐ Include time

☐ Include text string:

Save

**Video Rotate Type :**

Normal video

Save

**GOV Settings :**

H.264-1 GOV Length : 60 H.264-2 GOV Length : 60

H.264-3 GOV Length : 30 H.264-4 GOV Length : 30

Save

**H.264 Profile :**

H.264-1 : Main profile H.264-2 : Main profile

H.264-3 : Main profile H.264-4 : Main profile

Save

The default value of the video resolution is as below.

<b>2M</b>	H.264 1920 x 1080 (30 fps) + H.264 720 x 480 (30 fps)
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For more details about the combinations of video resolution, please refer to the Full HD Speed Dome IP Camera Menu Tree in the supplied CD.

## Appendix A: Technical Specifications

Items		F1	F2	F3
Camera				
Image Sensor		1/2.8" Sony Progressive CMOS		
Optical Zoom		18x	20x	30x
Digital Zoom		12x		
Focal Length		4.7 ~ 84.6 mm	4.7 ~ 94.0 mm	4.3 ~ 129.0 mm
Minimum illumination		0.5 lux (Color), 0.095 lux (B/W) @ F1.6		
Wide Dynamic Range		Shutter WDR (>96dB)		
Focus Mode		Auto / Manual		
White Balance		Auto / Indoor / Outdoor / ATW / Manual		
Iris Control		Auto / Manual		
Electronic Shutter		1/1 ~ 1/10000 sec.		
AGC Control		Auto / Manual		
Backlight Compensation		On / Off		
Operation				
Pan Travel		360° endless		
Tilt Travel		-10° ~ 190°		
Manual Speed		0.5° ~ 90° /s		
Presets		256		
Preset Accuracy		0.225°		
Preset Speed		5° ~ 400° /s		
Sequence		8		
Auto Pan		4		
Cruise		8		
Privacy Mask		16		
Proportional Pan & Tilt		On / Off (pan and tilt speed proportional to zoom ratio)		
Resume after Power loss		Support		
Home Function		Preset / Sequence / Auto Pan / Cruise		
Auto Flip		Image / Mechanical / Off		
Motion Detection		Motion Detection Window x 4 Sets		
Day / Night: IR Cut Filter		Auto / On / Off		
Image Rotation		Flip / Mirror / Inverse		
Electronic Image Stabilizer		On / Off		
Digital Noise Reduction	2D	On / Off		
	3D	On / Off		
Network				
Networking		10/100 Mb Ethernet (RJ-45)		
Video Compression		H.264 (MPEG-4 Part 10/AVC) / MJPEG		
Video Streaming	Dual Streams	H.264 + H.264 / MJPEG		
	Quad Streams	H.264 + H.264 + H.264 + H.264 / MJPEG		
Video Resolution	H.264	Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF		
	MJPEG	Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF		
Frame Rate	Dual Streams	1080P (30/25 fps) + D1 (30/25 fps)		
Audio Compression		G.711 / G.726		
Audio Streaming		Two-way Audio		
Protocols		IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IEEE 802.1X, QoS, ONVIF, ARP		
Security		HTTPS / IP Filter / IEEE 802.1X		
Alarm	Input	4 Sets / 5V 10kΩ pull up		
	Output	2 Sets / Relay Output max. 2A DC 30V / 0.5A AC 125V		
Alarm Reaction		Preset / Sequence / Auto Pan / Cruise		
microSD		microSDHC 32GB support		
Supported Web Browser		Internet Explorer (6.0+) / Chrome / Firefox / Safari		
Password Levels		User and Administrator		

General		
Environment		Indoor / Outdoor
Operating Temperature	Indoor	0°C ~ 40°C (32°F ~ 104°F)
	Outdoor	-40°C ~ 50°C (-40°F ~ 122°F)
Dimension	Indoor	ø 171.70 x 228.71 mm (ø 6.76 x 9.00 in.)
	Outdoor	ø 191.97 x 282.11 mm (ø 7.55 x 11.10 in.) w/ Sunshield
Weight	Indoor	1.60 kg (3.53 lbs)
	Outdoor	2.30 kg (5.07 lbs) w/ Sunshield
Power Source	Indoor	802.3at PoE+ (30 W) / AC 24V ± 10%
	Outdoor	802.3at PoE+ (60 W) / AC 24V ± 10%
Power Consumption	Indoor	24 W
	Outdoor	59 W (w/ Heater)
Regulatory	Indoor	CE / FCC / RoHS
	Outdoor	CE / FCC / RoHS / IP66

## Appendix B: Delete the Existing DC Viewer

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

### **Deleting the DC Viewer**

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 DC Viewer.

### **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.

## Appendix C: 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.