Outdoor Dome

Mounting on the Ceiling Using Flush Mount (Face Down)

Installation Guide

For Models:

D7x / E7x / D8x / E8x / KCM-7111 / KCM-7311 / ACM-7411

2014/02/14

ACTi
Connecting Vision

Table of Contents

Installation Procedures 3

Step 1: Drill a Hole on the Ceiling 3

Step 2: Prepare for Waterproof Installation 4

Waterproof Solution with Naked Cable 5

Waterproof Solution with Conduit 6

Step 3: Prepare the Flush Mount 8

Step 4: Open the Dome Cover 9

Step 5: Install the Camera 10

Step 6: Connect the Cable(s) 11

Step 7: Install the Mount 15

Step 8: Access the Camera Live View 16

Step 9: Adjust the Viewing Angle and Focus 16

Step 10: Close the Dome Cover 17

Step 11: Attach the Mount Cover 18

Appendices 19

Accessing the Camera Live View 19

Focus and Viewing Angle Adjustments 27

D7x / E7x Series 27

D8x / E8x Series 29

KCM-7111 30

KCM-7311 31

Safety Information 33

Installation Procedures

Step 1: Drill a Hole on the Ceiling

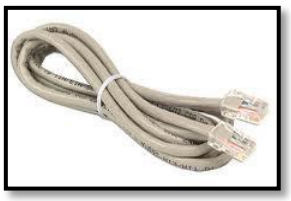
Drill a 184-mm diameter hole on the ceiling where you want to mount the camera.

Step 2: Prepare for Waterproof Installation

The camera comes with two (2) glands used for waterproof installation:

- **Cable Gland**: For use with an **Exterior-grade Ethernet cable**. Exterior-grade Ethernet cables are already waterproof. See ***Waterproof Solution with Naked Cable*** on page 5.
- **Conduit Gland**: For use with a flexible conduit. This solution is recommended when an exterior-grade Ethernet cable is not available or when other input/output devices or external power adapter will be connected to the camera (select models only). See ***Waterproof Solution with Conduit*** on page 6.

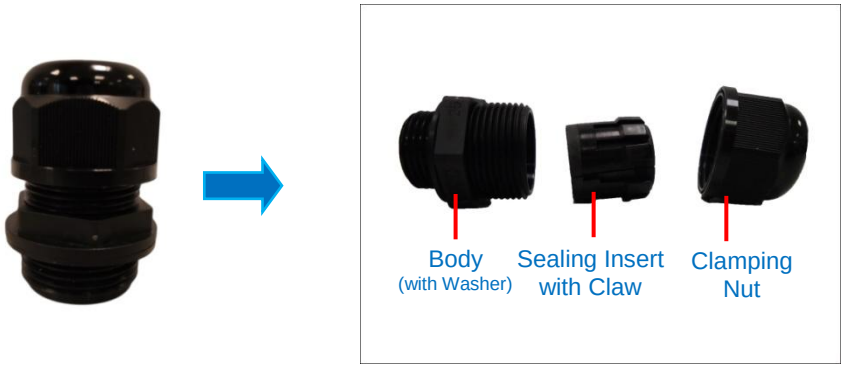
Determine the type of waterproof solution that is applicable to your installation requirements and prepare the necessary accessories or purchase extra materials.

Cable Gland	Conduit Gland
	
For use with an **Exterior-grade Ethernet cable** (not included in the package).	For use with a **3/8”** flexible conduit (not included in the package).
	**or**
	
	For use with **1/2”** flexible conduit (not included in the package)
	
	NOTE: The bundled conduit gland may vary. Check the conduit gland that came with your package to determine if 3/8” or 1/2" is the suitable flexible conduit size.

Waterproof Solution with Naked Cable

This section describes the procedures in using the bundled cable gland and an exterior-grade Ethernet cable.

1. Disassemble the cable gland as shown below:

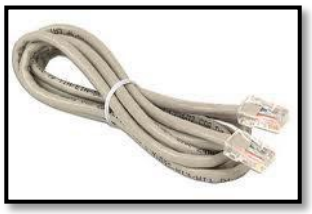


2. Skip to ***Step 3: Prepare the Flush Mount*** on page 8.

Waterproof Solution with Conduit

This section describes the procedures to waterproof the cabling connections using the bundled conduit gland and flexible conduit. This is the recommended when an exterior-grade Ethernet cable is not available or if other input/output devices or an external power adapter will be connected to the camera (select models only).

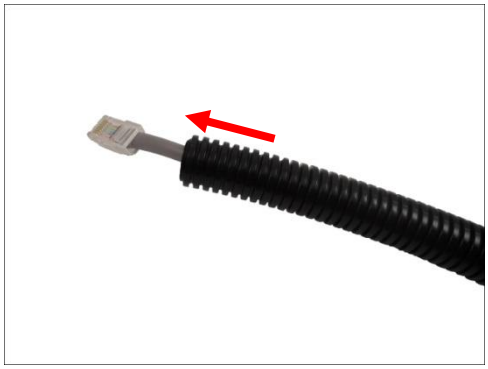
1. Prepare the following materials for waterproof installation:

<table>
<tr><th colspan="3">Conduit Gland
(included in the camera package)</th></tr>
<tr><td> 
For use with 3/8” flexible conduit</td><td>or</td><td> 
For use with 1/2” flexible conduit</td></tr>
<tr><th colspan="2">Flexible Conduit
3/8” or 1/2" Trade size
(not included in the package)</th><th>Network Cable
CAT 5 or CAT 6
(not included in the package)</th></tr>
<tr><td colspan="2"> 
NOTE: The bundled conduit gland may vary. Check the conduit gland that came with your package to determine if 3/8” or 1/2" is the suitable flexible conduit size.</td><td>  </td></tr>
</table>

2. Disassemble the bundled conduit gland as shown below:

NOTE: In this installation, the conduit gland body can be securely attached to the camera; therefore the use of lock nut is not necessary. Please set the lock nut aside.

3. Pull the network cable through the flex conduit.



Step 3: Prepare the Flush Mount

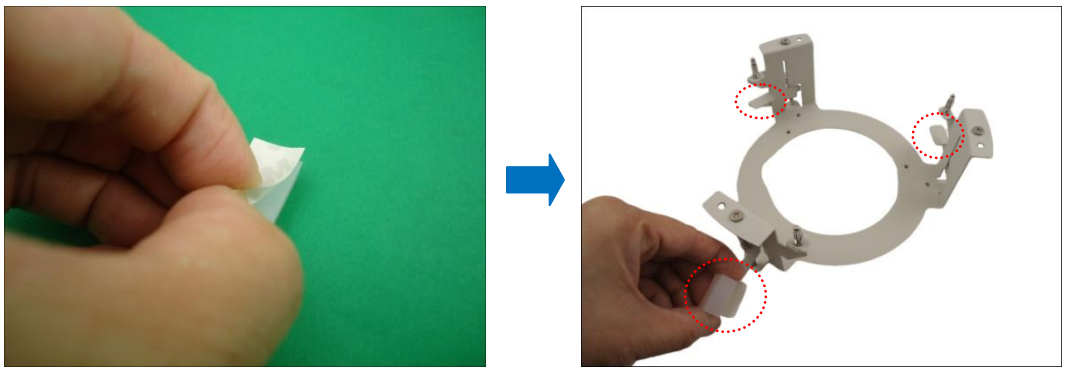
1. Route the flex conduit or network cable to dangle through the hole on the ceiling.

Using Flex Conduit

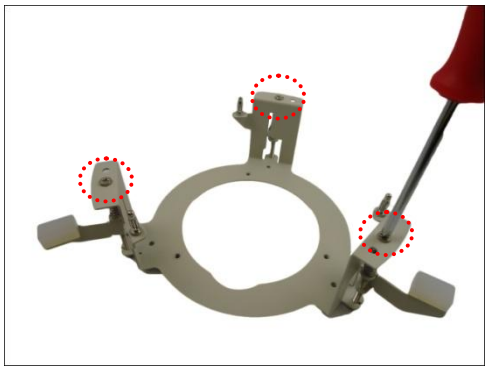
or

Using Naked Cable

2. Peel off the lining of the three (3) foam rubber pads and attach a rubber pad to each retaining bracket.



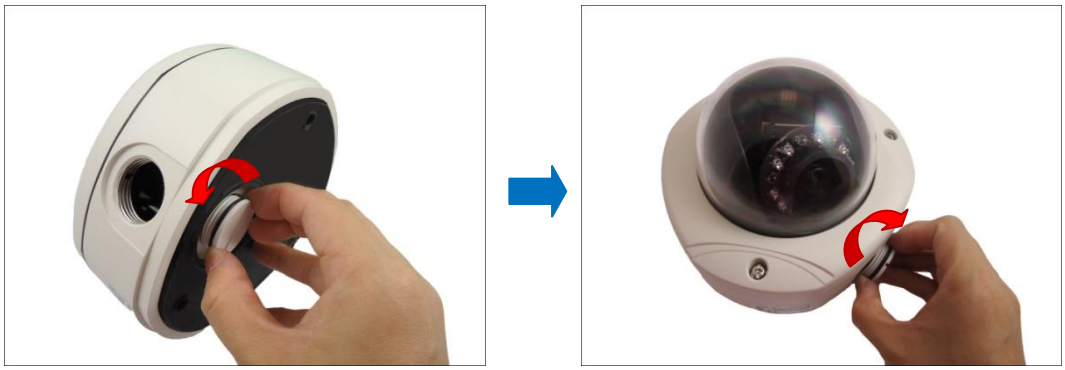
3. Using a screwdriver, loosen the retaining brackets according to the thickness of the ceiling.



Step 4: Open the Dome Cover

1. Remove the plastic covering the camera.

2. Remove the metal cap covering the bottom conduit hole of the camera, and attach the cap to the side conduit hole to close it.



3. Loosen the three (3) screws securing the dome cover.

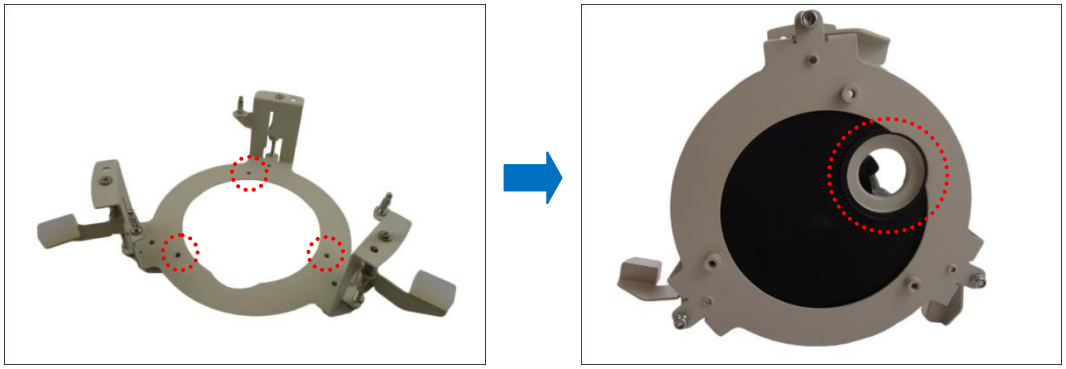
4. Carefully lift to open the dome cover and place it on the side of the camera.

   NOTE: Do not abruptly lift the dome cover; it is attached to the camera with a spring wire.

Step 5: Install the Camera

1. If necessary, insert a memory card (not supplied) into the card slot of the camera.

2. Align the screw holes and conduit hole of the camera to the mount.



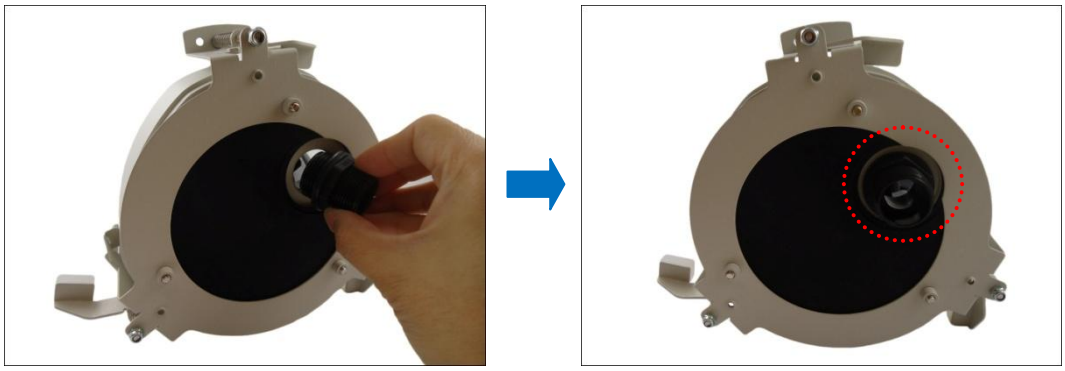
3. Attach the three (3) screws (included in the flush mount package) to secure the camera to the mount.

⚠ **CAUTION:** ***When using electric screwdrivers,*** be careful not to touch the internal camera components while attaching the screws. Since electric screwdrivers vary in sizes, speed, and force, they may bruise and damage the internal camera components.

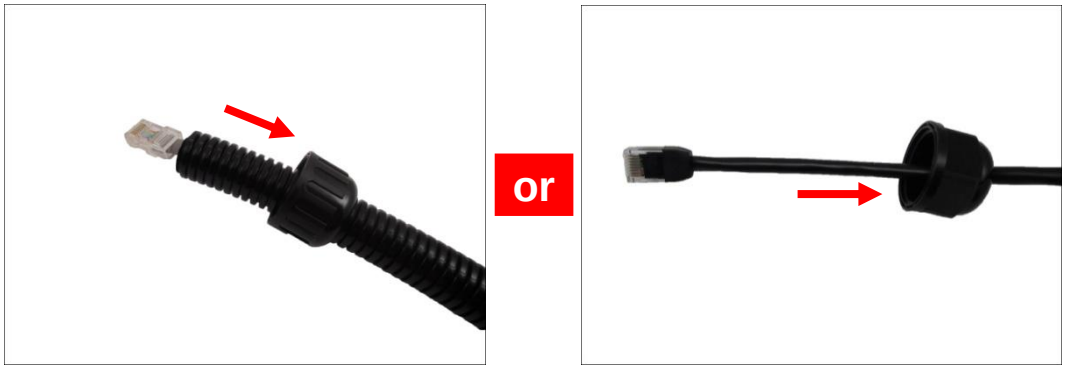
DISCLAIMER: ACTi will not be responsible for camera damage caused by improper installations or the misuse of equipment for installation.

Step 6: Connect the Cable(s)

1. Tightly attach the conduit gland body to the conduit hole of the camera.



2. Insert the clamping nut.

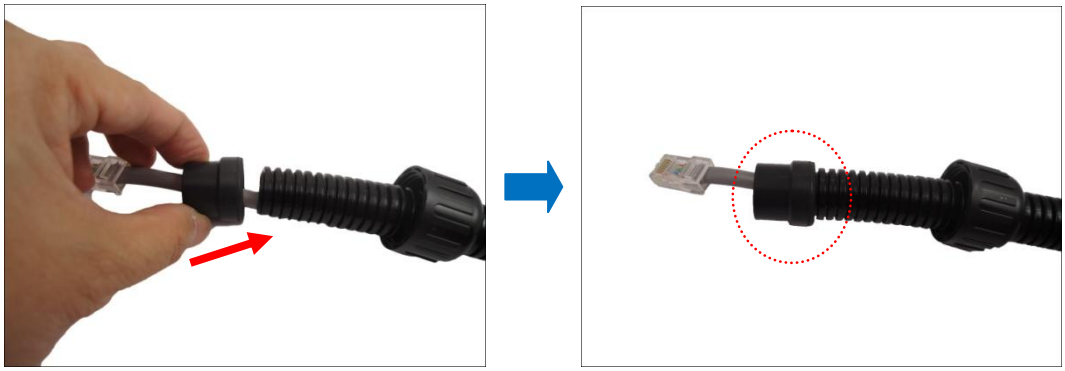


Using Flex Conduit

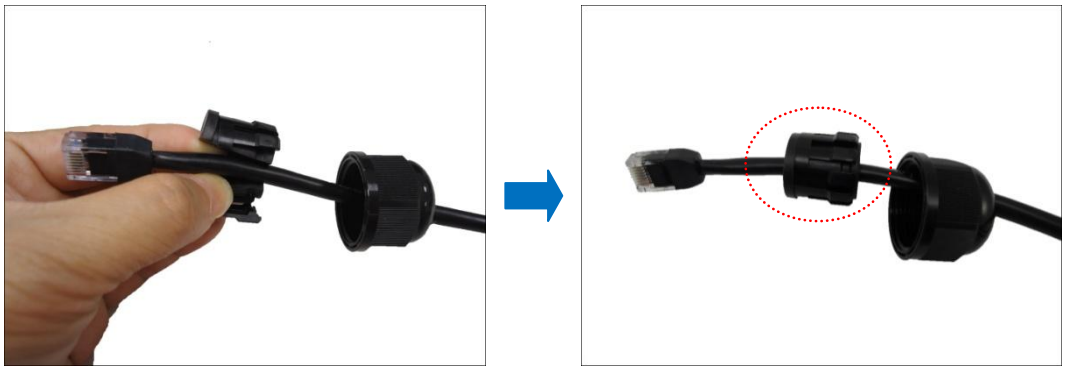
Using Naked Cable

3. Insert the sealing insert. For flex conduit solution, attach the sealing insert at the end of the flex conduit.

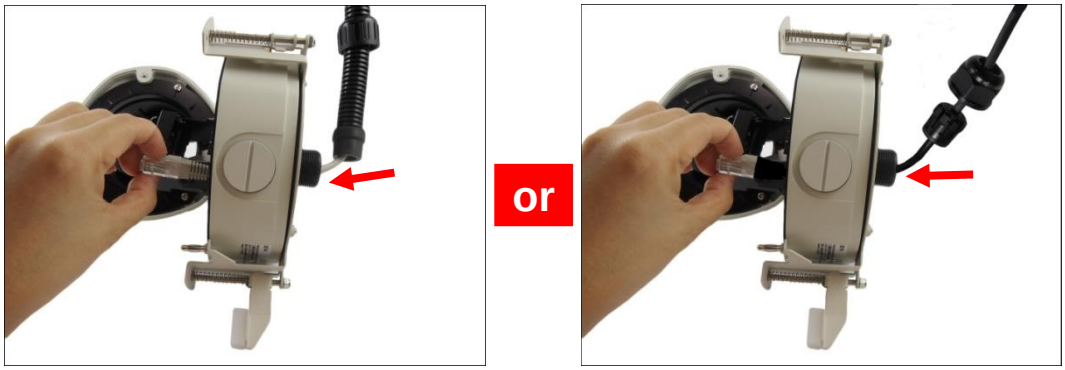
Using Flex Conduit



Using Naked Cable



4. Pull the network cable through the camera conduit hole.



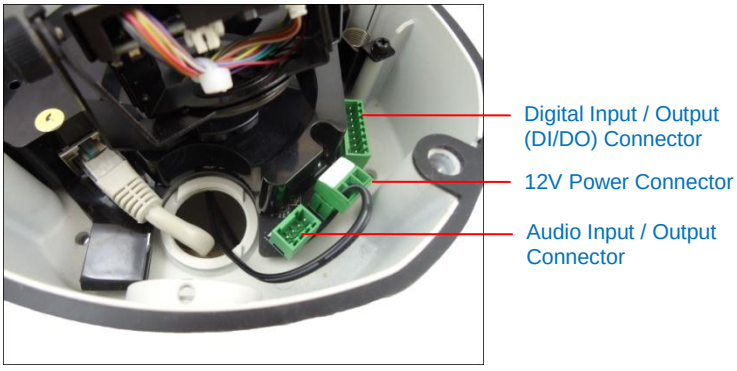
Using Flex Conduit | Using Naked Cable

NOTE: For camera models that support external power adaptor, audio in/out, or digital input/output (DI/DO) functions, route the cables without connectors through the flex conduit together with the network cable. Once cables pass through the conduit hole of the camera, attach the bundled connectors.

NOTE: For more information on connecting these cables, please refer to the camera model hardware manual downloadable from the website (www.acti.com).

5. Connect the network cable to the Ethernet port of the camera.

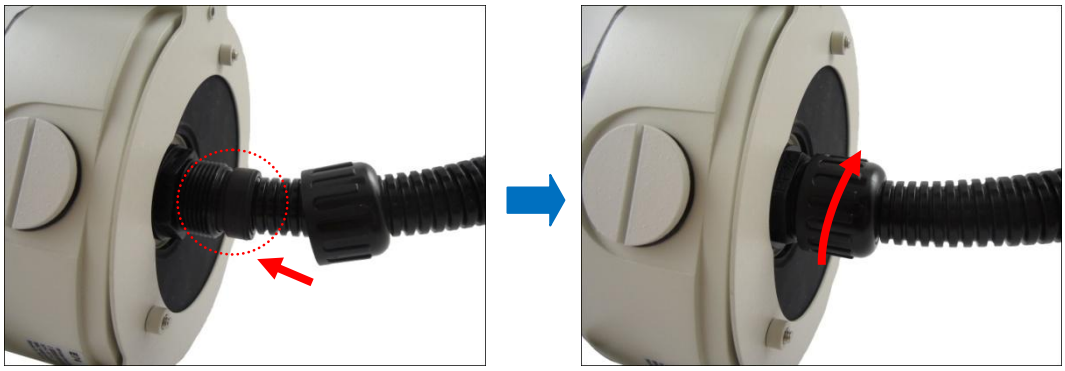
NOTE: For models with other connectors (e.g. power adaptor, DI/DO, etc.), connect the cables to their corresponding connectors. Sample image below.



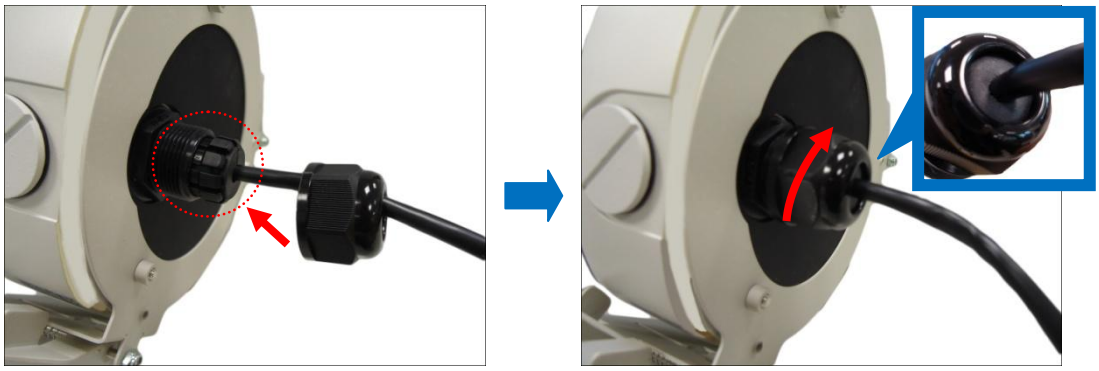
For more information on connecting these cables, please refer to the camera model hardware manual downloadable from the website (www.acti.com).

6. Insert the sealing nut into the gland body and then attach the clamping nut to complete the cable solution.

Using Flex Conduit



Using Naked Cable



NOTE: Make sure the clamping nut is tightly attached to the gland body to avoid water leak.

Step 7: Install the Mount

1. Insert the flush mount through the hole on the ceiling.

2. Position the retaining brackets to hold the mount on the ceiling.

NOTE: The following illustration shows how the flush mount will look like when viewed from inside the ceiling. In case you cannot access inside the ceiling, use your fingers to position the retaining brackets through the hole.

3. Tighten the screws to secure the mount to the ceiling.

Step 8: Access the Camera Live View

See ***Accessing the Camera Live View*** on page 19 for more information.

Step 9: Adjust the Viewing Angle and Focus

Based on the Live View, adjust the viewing angle and orientation of the camera. Adjustments vary per model, for detailed information, please refer to the following sections:

- For D7x / E7x camera models, see ***D7x / E7x Series*** on page 27.
- For D8x / E8x / ACM-7411 camera models, see ***D8x / E8x Series*** on page 29.
- For KCM-7111 camera models, see ***KCM-7111*** on page 30.
- For KCM-7311 camera models, see ***KCM-7311*** on page 31.

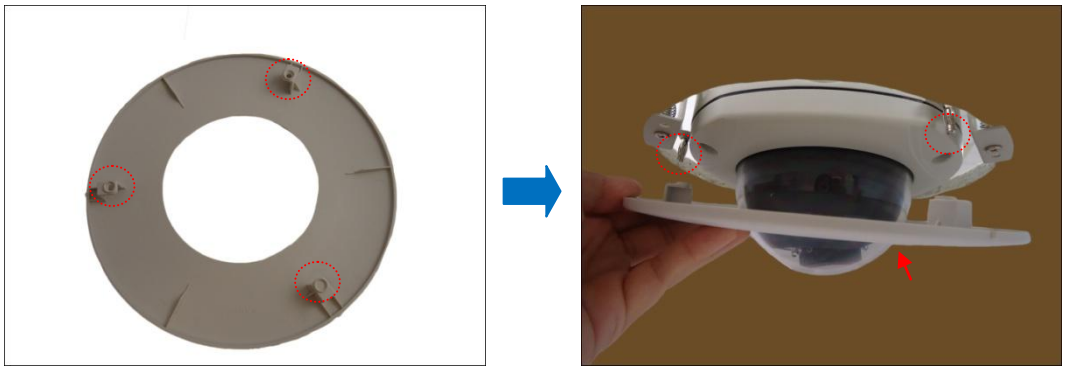
Step 10: Close the Dome Cover

1. Align the position of the dome cover shroud to the direction of the lens.

2. Tighten the three (3) screws to attach the dome cover to the camera body.

Step 11: Attach the Mount Cover

1. Align the metal latches and the lathes on the flush mount cover.



2. Push to firmly secure the flush mount cover latches.

The mounted camera should look like the image below.

Appendices

Accessing the Camera Live View

Connect the Equipment

To be able to connect to the camera firmware from your PC, both the camera and the PC have to be connected to each other via Ethernet cable. At the same time, the camera has to have its own power supply. In case of PoE cameras, you can use a PoE Injector or a PoE Switch between the camera and the PC. The cameras that have the DC power connectors may be powered on by using a power adaptor.

The Ethernet port LED or Power LED of the camera will indicate that the power supply for the camera works normally.

Configure the IP Addresses

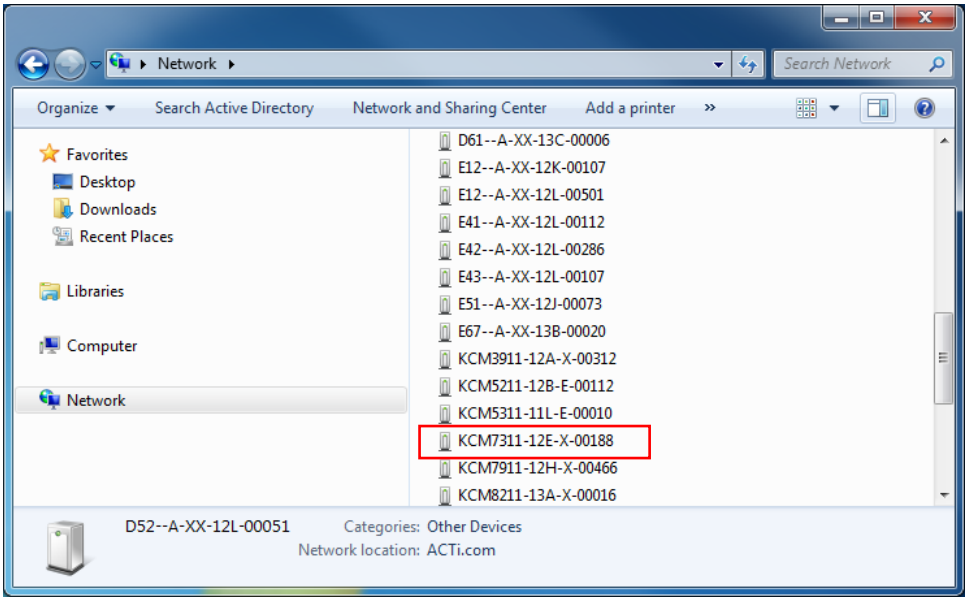
In order to be able to communicate with the camera from your PC, both the camera and the PC have to be within the same network segment. In most cases, it means that they both should have very similar IP addresses, where only the last number of the IP address is different from each other. There are 2 different approaches to IP Address management in Local Area Networks – by DHCP Server or Manually.

Using DHCP server to assign IP addresses:

If you have connected the computer and the camera into the network that has a DHCP server running, then you do not need to configure the IP addresses at all – both the camera and the PC would request a unique IP address from DHCP server automatically. In such case, the camera will immediately be ready for the access from the PC. The user, however, might not know the IP address of the camera yet. It is necessary to know the IP address of the camera in other to be able to access it by using a Web browser.

The quickest way to discover the cameras in the network is to use the simplest network search, built in the Windows system – just by pressing the “Network” icon, all the cameras of the local area network will be discovered by Windows thanks to the UPnP function support of our cameras.

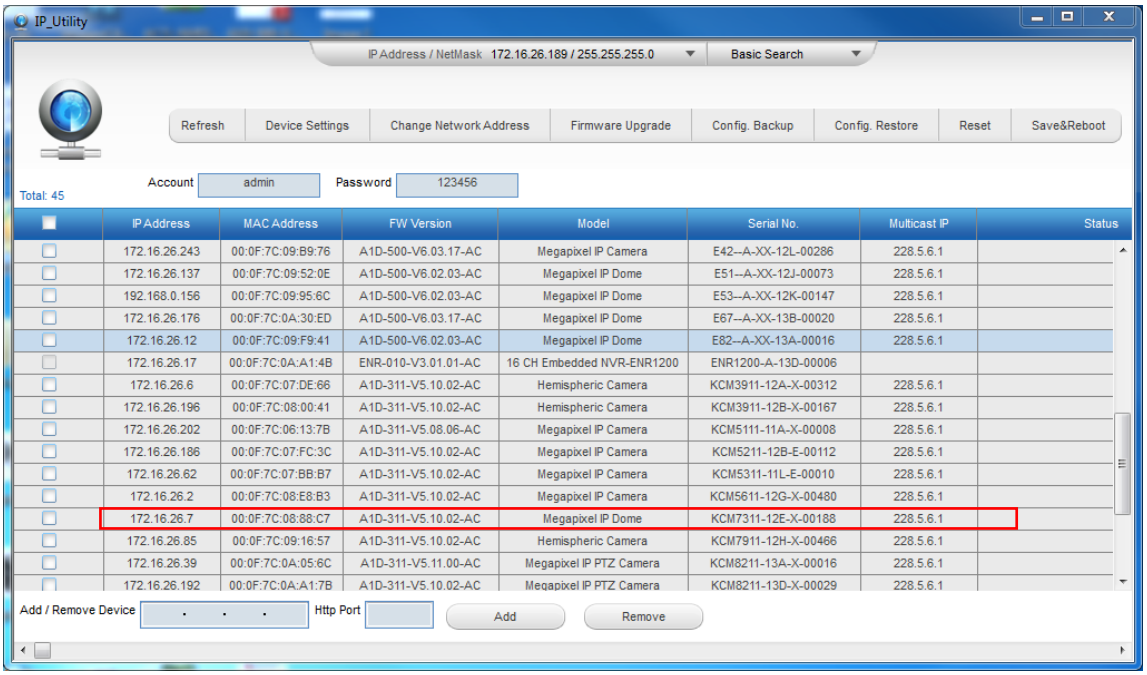
In the example below, we successfully found the camera model that we had just connected to the network.



By double-clicking the mouse button on the camera model it is possible to automatically launch the default browser of the PC with the IP address of the target camera filled in the address bar of the browser already.

If you work with our cameras regularly, then **there is even a better way to discover the cameras in the network** – by using **IP Utility**. The IP Utility is a light software tool that can not only discover the cameras, but also list lots of valuable information, such as IP and MAC addresses, serial numbers, firmware versions, etc, and allows quick configuration of multiple devices at the same time.

The IP Utility can be downloaded for free from **http://www.acti.com/IP_Utility**
With just one click, you can launch the IP Utility and there will be an instant report as follows:



You can quickly notice the camera model in the list. Click on the IP address to automatically launch the default browser of the PC with the IP address of the target camera filled in the address bar of the browser already.

Use the default IP address of a camera:

If there is no DHCP server in the given network, the user may have to assign the IP addresses to both PC and camera manually to make sure they are in the same network segment.

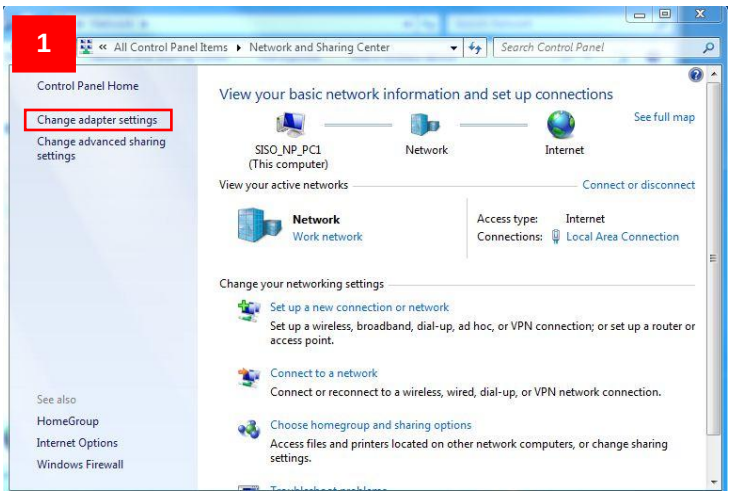
When the camera is plugged into network and it does not detect any DHCP services, it will automatically assign itself a default IP:

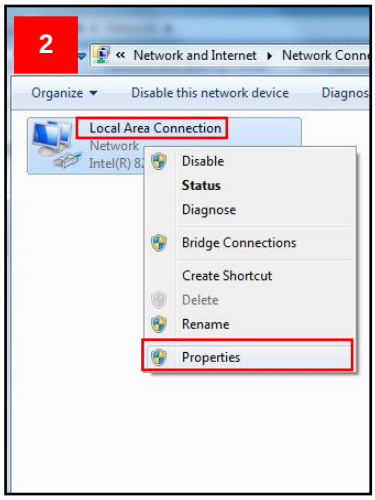
192.168.0.100

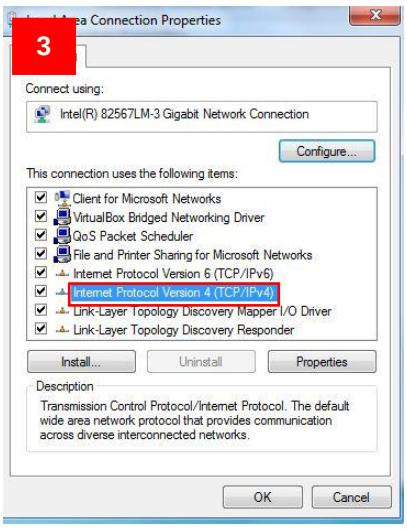
Whereas the default port number would be **80**. In order to access that camera, the IP address of the PC has to be configured to match the network segment of the camera.

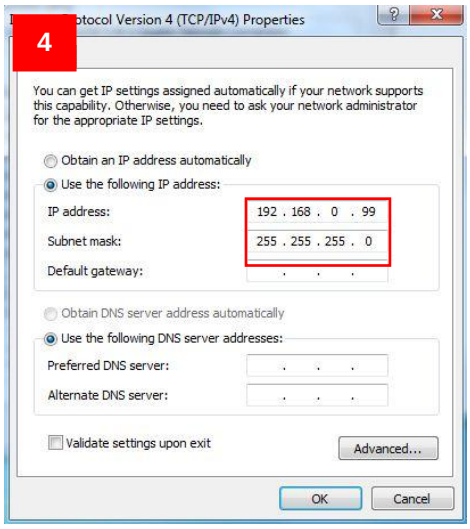
Manually adjust the IP address of the PC:

In the following example, based on Windows 7, we will configure the IP address to **192.168.0.99** and set Subnet Mask to **255.255.255.0** by using the steps below:



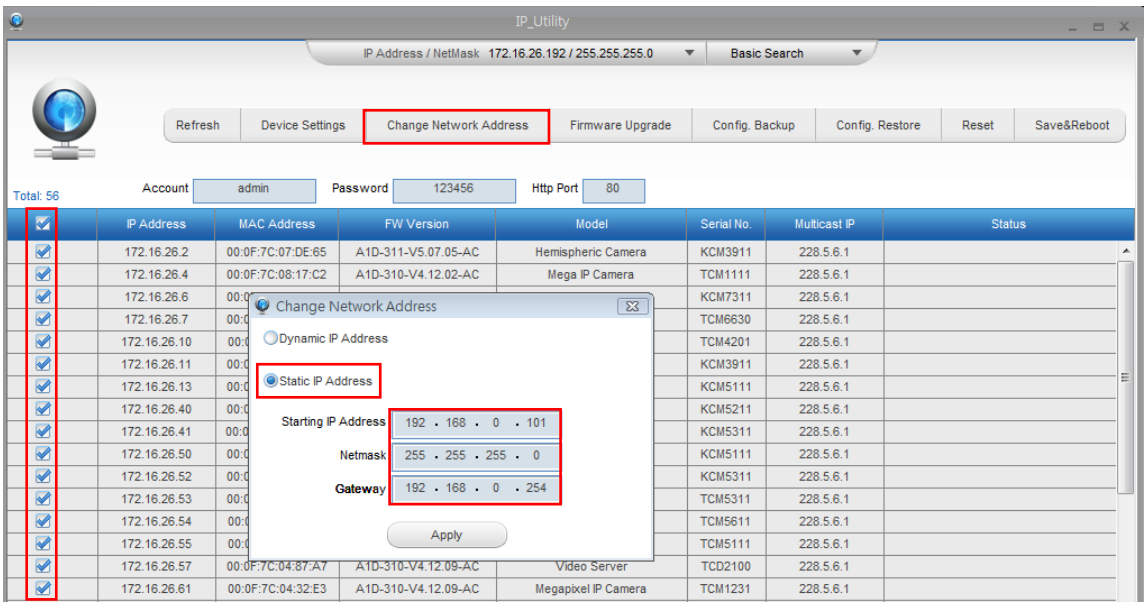






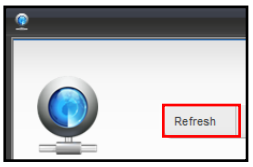
Manually adjust the IP addresses of multiple cameras:

If there are more than 1 camera to be used in the same local area network and there is no DHCP server to assign unique IP addresses to each of them, all of the cameras would then have the initial IP address of **192.168.0.100**, which is not a proper situation for network devices – all the IP addresses have to be different from each other. The easiest way to assign cameras the IP addresses is by using **IP Utility**:



With the procedure shown above, all the cameras will have unique IP addresses, starting from 192.168.0.101. In case there are 20 cameras selected, the last one of the cameras would have the IP 192.168.0.120.

Later, by pressing the “Refresh” button of the IP Utility, you will be able to see the list of cameras with their new IP addresses.



Please note that it is also possible to change the IP addresses manually by using the Web browser. In such case, please plug in only one camera at a time, and change its IP address by using the Web browser before plugging in the next one. This way, the Web browser will not be confused about two devices having the same IP address at the same time.

Access the Camera

Now that the camera and the PC are both having their unique IP addresses and are under the same network segment, it is possible to use the Web browser of the PC to access the camera.

You can use **any of the browsers** to access the camera, however, the full functionality is provided only for **Microsoft Internet Explorer**.

The browser functionality comparison:

Functionality	Internet Explorer	Other browsers
Live Video	Yes	Yes*
Live Video Area Resizable	Yes	No
PTZ Control	Yes	Yes
Capture the snapshot	Yes	Yes
Video overlay based configuration (Motion Detection regions, Privacy Mask regions)	Yes	No
All the other configurations	Yes	Yes

* When using non-Internet Explorer browsers, free third-party software plug-ins must be installed to the PC first to be able to get the live video feed from the camera. Check the firmware version of the camera to determine which plug-in is necessary:

Firmware Version	Required Plug-In
A1D-500-V6.**04**.xx-AC or older	Basic VLC Media Player (http://www.videolan.org)
A1D-500-V6.**05**.xx-AC or newer	QuickTime (http://www.apple.com/quicktime/download/)

The camera firmware version can be found on the **FW Version** column of the IP utility or access the **Setup** page of the Web Configurator (see page 26).

Disclaimer Notice: The camera manufacturer does not guarantee the compatibility of its cameras with VLC player or QuickTime – since these are third party softwares. The third parties have the right to modify their utility any time which might affect the compatibility. In such cases, please use Internet Explorer browser instead.

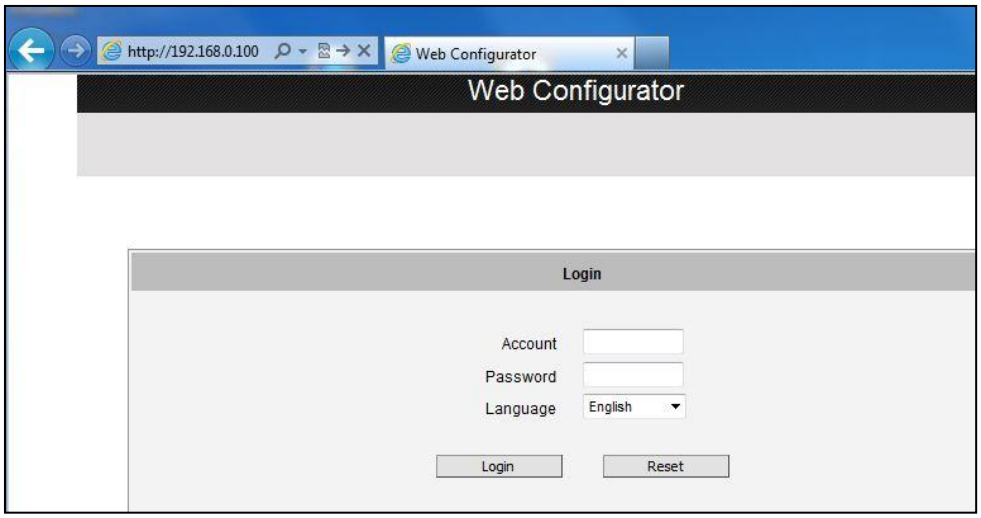
When using Internet Explorer browser, the ActiveX control for video stream management will be downloaded from the camera directly – the user just has to accept the use of such control when prompted so. No other third party utilities are required to be installed in such case.

The following examples in this manual are based on Internet Explorer browser in order to cover all functions of the camera.

Assuming that the camera's IP address is **192.168.0.100**, you can access it by opening the Web browser and typing the following address into Web browser's address bar:

http://192.168.0.100

Upon successful connection to the camera, the user interface called **Web Configurator** would appear together with the login page. The HTTP port number was not added behind the IP address since the default HTTP port of the camera is 80, which can be omitted from the address for convenience.

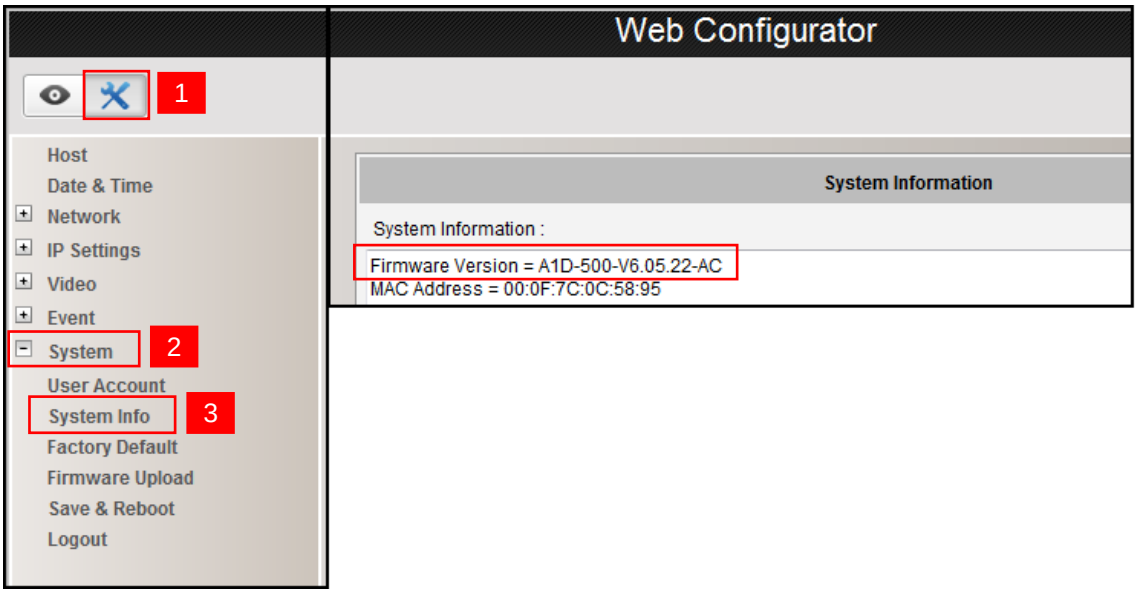


Before logging in, you need to know the factory default Account and Password of the camera.

Account: **Admin**

Password: **123456**

To check the firmware version through the Web Configurator, access the **Setup** page and click **System** > **System Info**.



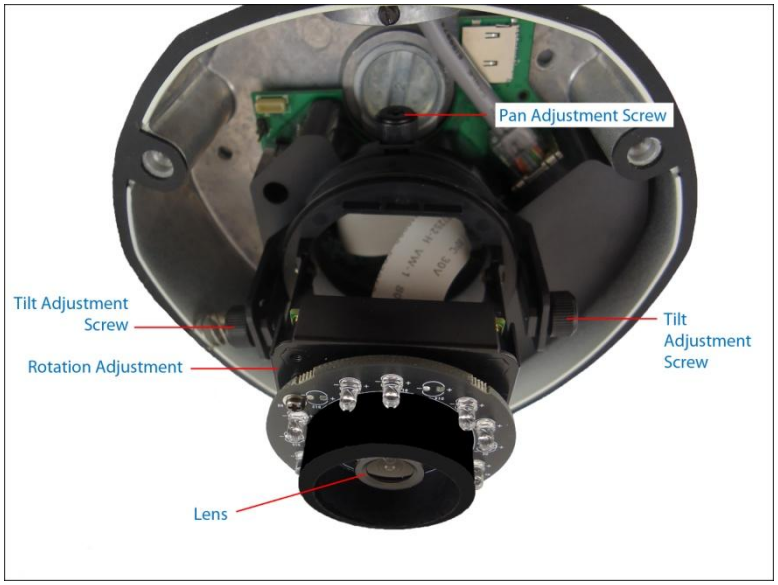
For further operations, please refer to the **Firmware User Manual** downloadable from the website (**www.acti.com**).

Focus and Viewing Angle Adjustments

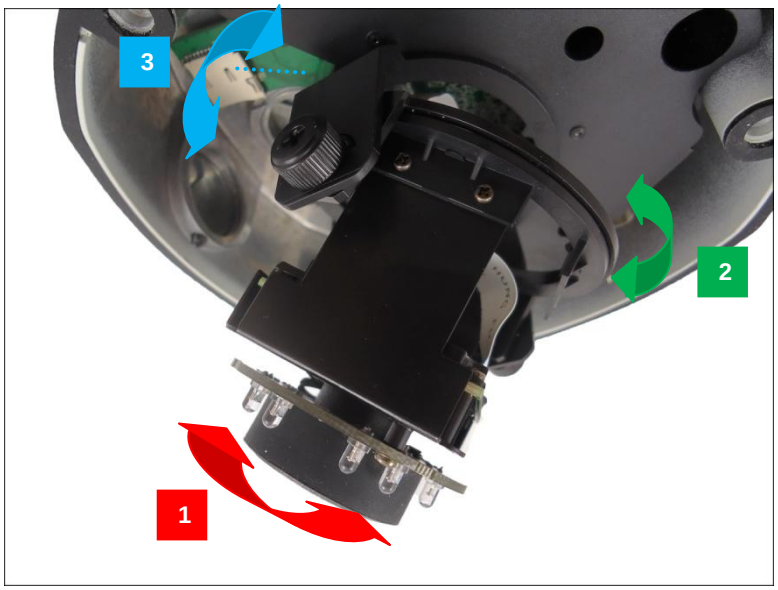
This section describes the procedures in adjusting the viewing angle, focus, and pan direction of the different camera models under the 4” Outdoor Dome series.

D7x / E7x Series

Camera Parts Overview

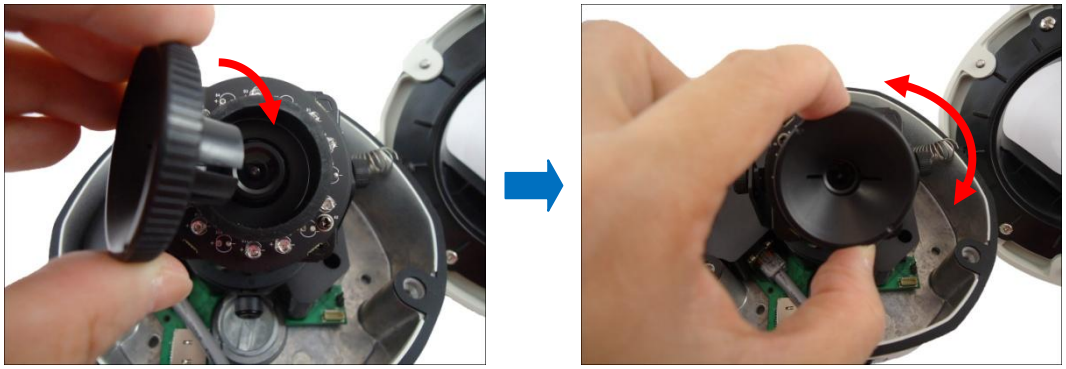


Adjustment Procedures



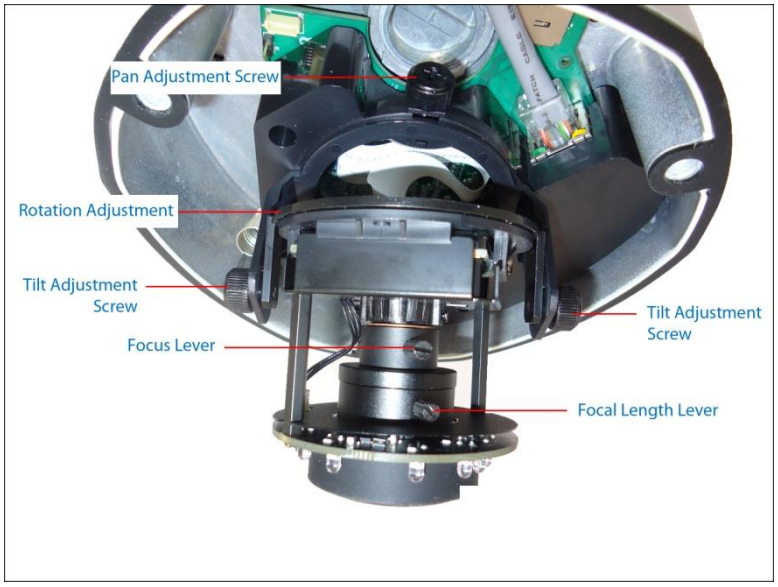
1. Loosen the tilt adjustment screws, adjust the tilt, and then tighten back the screws to fix the tilt position.
2. Move the rotation adjustment to rotate the viewing orientation.
3. Loosen the pan adjustment screw, move the pan direction, and then tighten back the screw to fix the pan position.

4. Attach the bundled lens focus tuner unto the lens and turn left or right to adjust the focus.

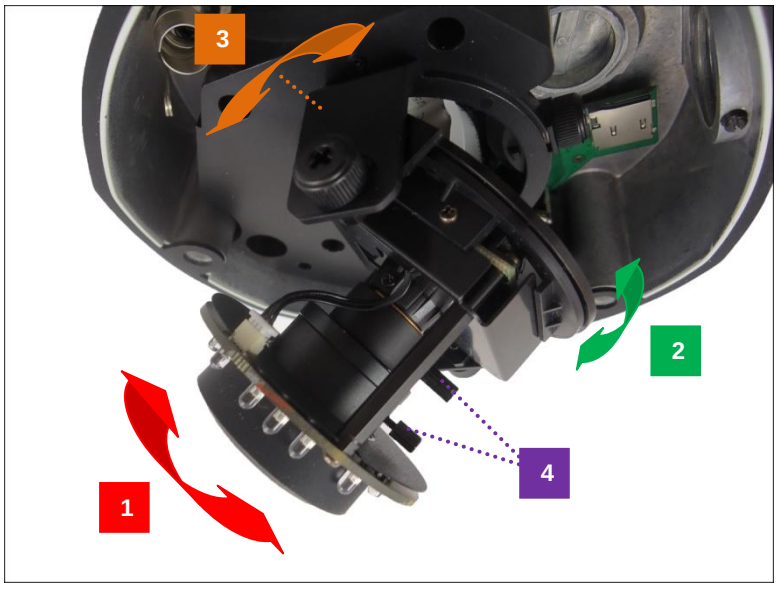


D8x / E8x Series

Camera Parts Overview



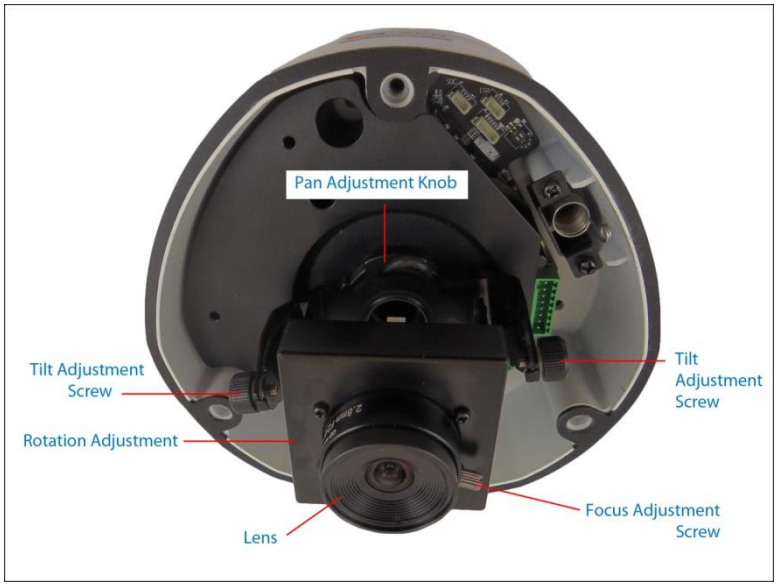
Adjustment Procedures



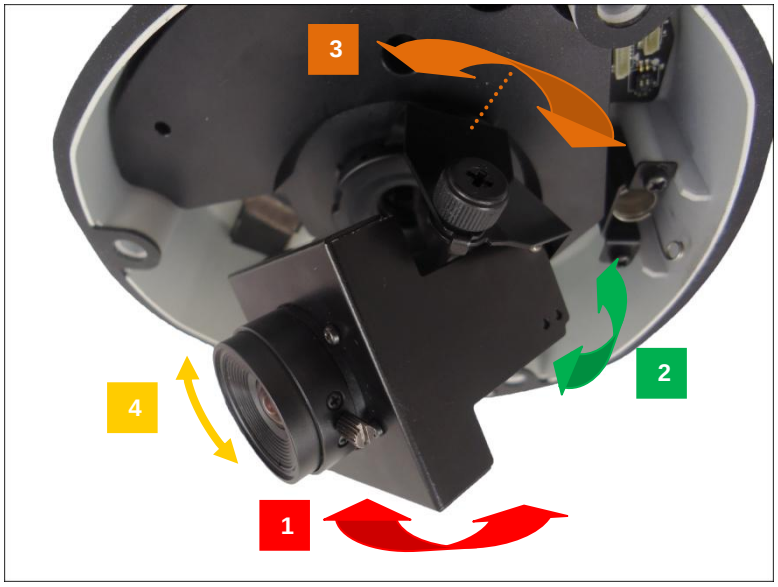
1. Loosen the tilt adjustment screws, adjust the tilt, and then tighten back the screws to fix the tilt position.
2. Move the rotation adjustment to rotate the viewing orientation.
3. Loosen the pan adjustment screw, move the pan direction, and then tighten back the screw to fix the pan position.
4. Move the zoom and focus levers left or right to adjust the focus and the viewing angle.

KCM-7111

Camera Parts Overview



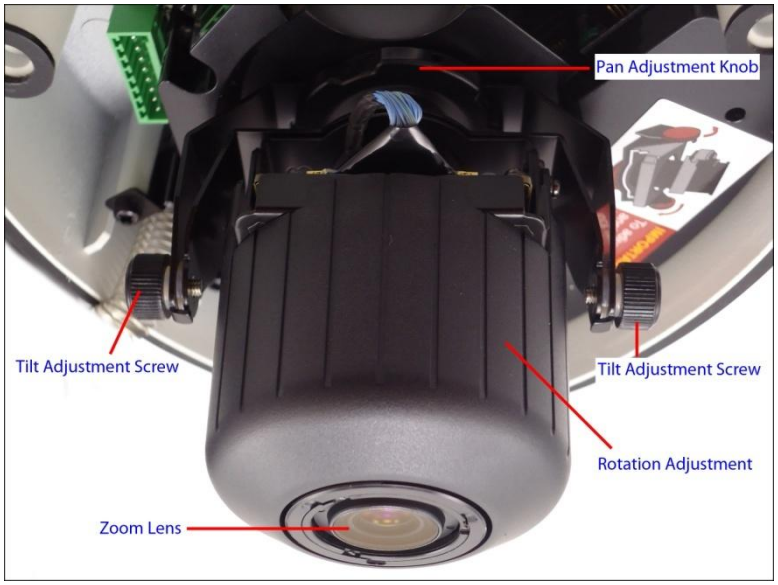
Adjustment Procedures



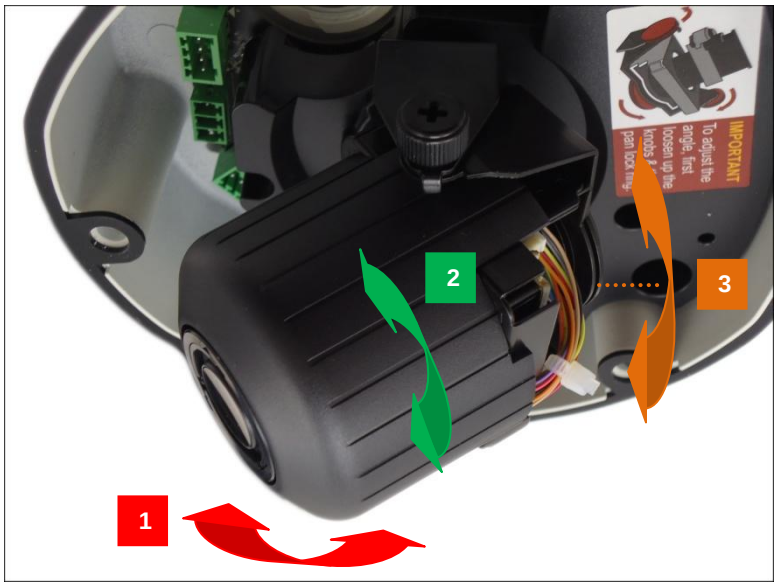
1. Loosen the tilt adjustment screws, adjust the tilt, and then tighten back the screws to fix the tilt position.
2. Move the rotation adjustment to rotate the viewing orientation.
3. Loosen the pan adjustment screw and move the pan direction.
4. Loosen the focus adjustment screw, and move the lens left or right to adjust focus, and then tighten back the screw to fix the lens position.

KCM-7311

Camera Parts Overview



Adjustment Procedures



1. Loosen the tilt adjustment screws, adjust the tilt, and then tighten back the screws to fix the tilt position.
2. Move the rotation adjustment to rotate the viewing orientation.
3. Move the pan direction left or right.

NOTE: If you need to tighten or loosen the pan adjustment knob and adjustment by hand is not enough, insert the bundled pan bracket wrench into the hole on the knob and then push it to the left or to the right.

Safety Information

Read these instructions

You should read all the safety and operating instructions before using this product.

Heed all warnings

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

Trademarks

All names used in this manual are probably registered trademarks of respective companies.

Liability

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Do not use accessories not recommended by the manufacturer

Only install this device in a dry place protected from weather

Servicing

Do not attempt to service this video product yourself. Refer all servicing to qualified service personnel.

Damage Requiring service

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

1) When the power-supply cord or plug is damaged
2) If liquid has been spilled, or objects have fallen into the video product.
3) If the inner parts of video product have been directly exposed to rain or water.
4) If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage, and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine if the video product is in proper operating condition.