



# Indoor Dome Series Hardware Manual

A61, A62

2018/01/29



**ACTi**  
Connecting Vision

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# Precautions

## **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.

## **Servicing**

Do not attempt to service this video device yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

## **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.

### Federal Communications Commission Statement



This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Warning:** Changes or modifications to the equipment that are not expressly approved by the responsible party for compliance could void the user's authority to operate the equipment.

### European Community Compliance Statement



This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022 and EN 55024. In a domestic environment, this product may cause radio interference in which cause the user may be required to take adequate measures.

## Safety Instructions

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### **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.

# Introduction

## The List of Models





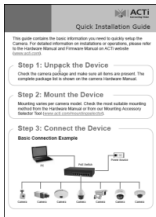

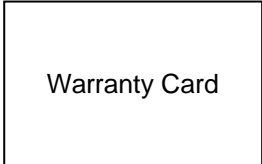
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This hardware manual contains the following models:

A61		3MP Indoor Zoom Dome with D/N, Adaptive IR, Extreme WDR, SLLS, 4.3x Zoom lens
A62		5MP Indoor Zoom Dome with D/N, Adaptive IR, Advanced WDR, SLLS, 4.3x Zoom lens

From the installation perspective these models are very similar; therefore you can use one manual for all of them.

## Package Contents

Camera	Mounting Screw Kit	Hexagon Wrench
		
Terminal Block	Quick Installation Guide	Drill Template
		
Warranty Card		
		

**Note:** The pictures are for reference only.

## Physical Description



Item	Description
<p><b>1</b> <b>Input / Output Connectors</b> (see <a href="#">Connecting Other Devices</a> on page 16)</p> <p>DC 12V Power Input</p> <p>Audio Input (AI) / Output (AO)</p> <p>Digital Input / Output (DI/DO)</p> <p>Video Output (VO)</p>	<p>In case the camera is connected to a non-PoE (Power over Ethernet) switch, use this connector to connect the camera to an external power adapter (not included).</p> <p>This connector connects to audio input and output devices, such as microphones and speakers.</p> <p>This connector connects to digital input or output devices, such as an alarm trigger, panic button, etc. Digital Input (DI) and Digital Output (DO) devices are used in applications like motion detection, event triggering, alarm notifications, etc.</p> <p>This connector connects to an analog video output device.</p>
<p><b>2</b> Memory Card Slot</p>	<p>Insert a memory card into this slot for local recording purposes. See <a href="#">How to Use a Memory Card</a> on page 19 for more information.</p> <p><b>NOTE:</b> Supports microSDHC and microSDXC cards.</p>
<p><b>3</b> Ethernet Port</p>	<p>Connects to a network using an Ethernet cable.</p>

## Mounting Options

There are several mounting options that you can use to install the camera. Select the most suitable solution for your installation environment.

Mount Types	Accessories
Surface Mount	Suitable when mounting the camera directly on walls or ceilings without extra accessories. See <i>Installing the Camera on a Surface</i> on page 11 for mounting instructions.
Flush Mount	Suitable when mounting the camera inside the ceiling wherein only the dome cover is seen below the ceiling.
Pendant Mount	Suitable when mounting the camera on hard and high ceilings.
Straight Wall Mount	Suitable when mounting the camera on straight walls.
Vertical Pole Mount	Suitable when mounting the camera on vertical poles.
Horizontal Pole Mount	Suitable when mounting the camera on horizontal poles.

**NOTE:**

- For more information about the mounting solutions and accessories, please check the *Mounting Accessory Selector* in our website (<http://www.acti.com/mountingselector>).
- The above mounting accessories are not included in the package. Contact your sales agents to purchase.

# Installing the Camera on a Surface

This section describes the procedures in installing the camera on a flat surface such as a hard or dropped ceiling and straight or tilted walls. Before installation, make sure the wall or the ceiling can bear more than the weight of the camera.

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

## Step 1: Drill the Holes

Before drilling the holes on the ceiling or wall, note the direction of the connectors side of the camera, which is also the opposite side of the camera logo. This influences the camera placement and where you should drill the hole where the cables will pass through or how the cables will go along the ceiling or wall.

1. Use the supplied drill template to mark the screw holes on the surface according to the preferred orientation.
2. Determine how the cables will be routed: ***pass through the surface*** or ***along the surface***.
  - ***If the cables will pass through the surface***, drill the cable hole and the screw holes on the surface.
  - ***If the cables will be routed along the surface***, drill the screw holes on the surface.  
Remove the plastic tab on the camera base.



3. Insert the plastic plugs into the screw holes.

## Step 2: Open the Dome Cover

**NOTE:** To avoid scratches or leaving fingerprints on the dome cover, it is recommended to retain the plastic covering the dome cover until the camera is completely installed.

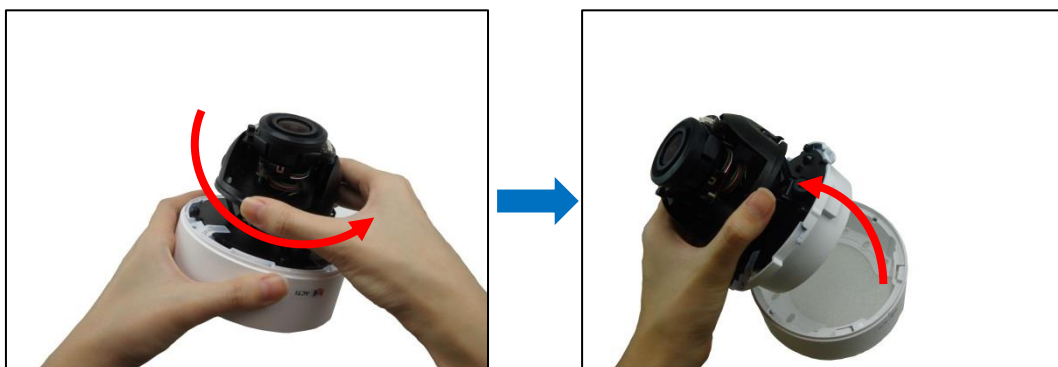
1. With the bundled hexagon wrench, loosen the two (2) screws securing the dome cover.



2. Lift to remove the dome cover.



3. Hold the camera module and then twist the base casing counter-clockwise to detach it.

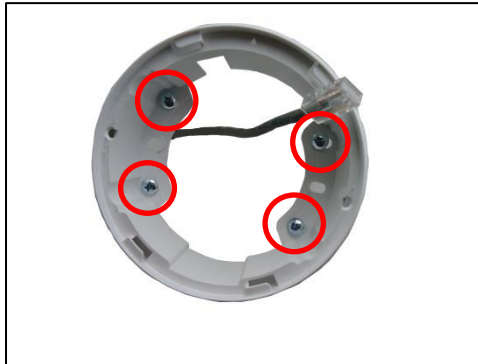


## Step 3: Mount the Camera to the Surface

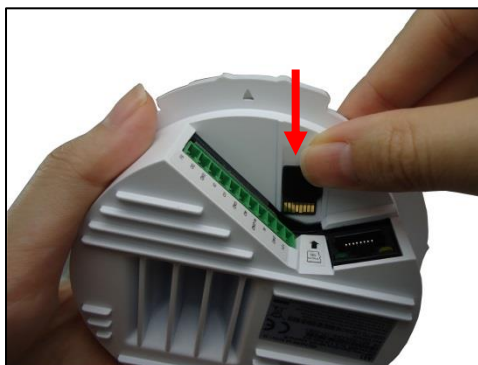
1. **If the cables will be coming out from the surface**, route the cable through the hole on the surface. **If the cable will go along the surface**, route the cable along the surface and through the cable gap on the base of the camera.



2. Mount the camera base to the surface using the bundled screws.



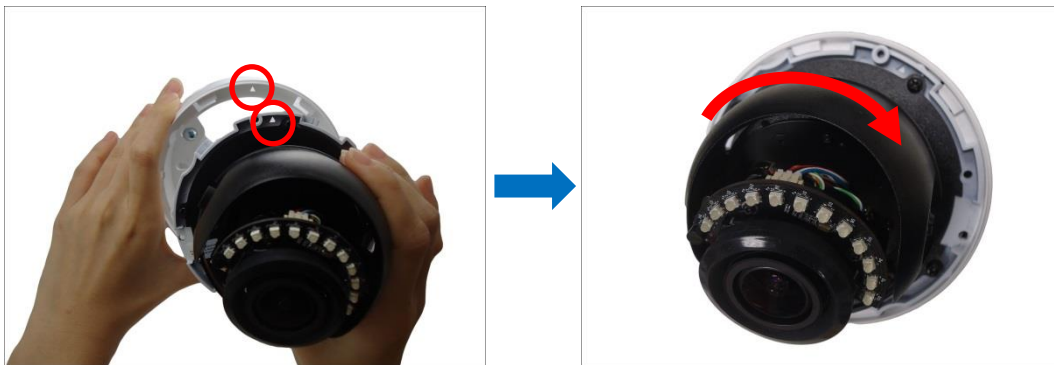
3. If necessary, insert a memory card into the card slot, with the metallic contacts facing down the camera.



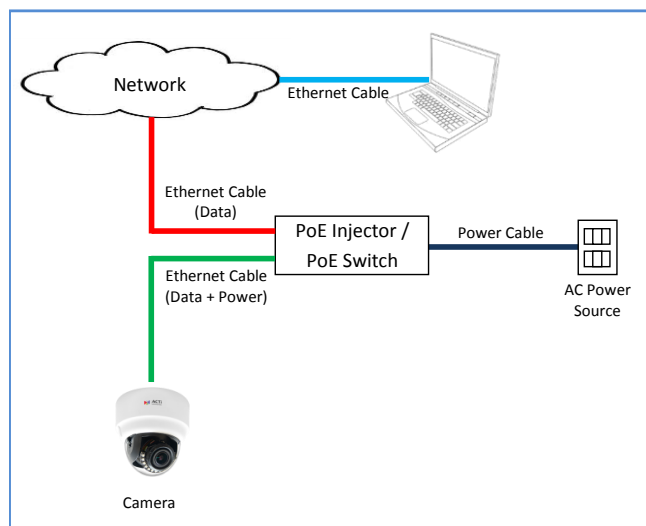
4. Connect the network cable and other cables (if any) to the camera. For detailed instruction on connecting other devices to the computer, see [Connecting Other Devices](#) on page 16.



5. Align the arrows marking the base and the camera then twist the camera clockwise to lock it to the base.



6. Connect the other end of the network cable to a switch or injector. Then, connect the switch or injector to a network, PC and a power source. See Power-over-Ethernet (PoE) connection example below.



## Step 4: Access the Camera Live View

See [Accessing the Camera](#) on page 20 for more information on how to access the Live View of the camera.

## Step 5: Adjust the Viewing Angle

Based on the camera live view, adjust the viewing angle and orientation of the camera.

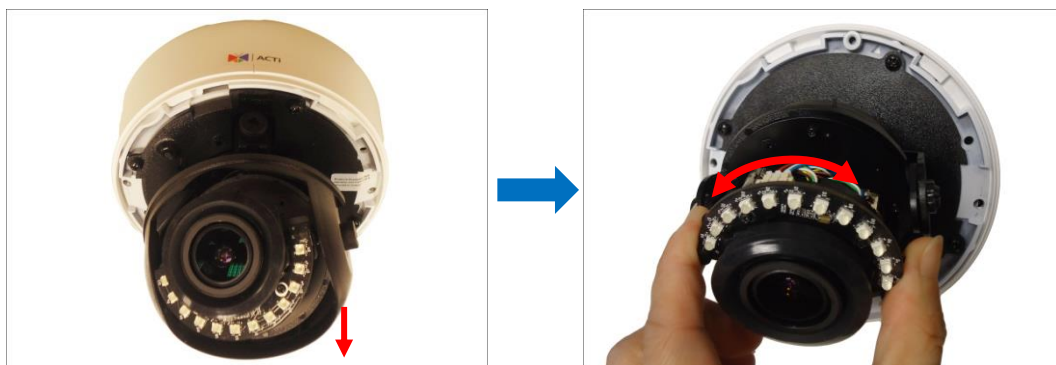
1. Loosen the pan adjustment screw then move the camera lens module left or right to turn the direction.



2. Loosen the tilt adjustment screws, adjust the tilt, and then tighten back the screws to fix the tilt position.



3. To rotate the camera view, remove the lens module cover, then turn the lens module.



## Connecting Other Devices

This section describes the procedures in preparing the external devices that you can connect to the camera. The camera supports DC12V power input, Digital Input and Output (DI/DO), Audio Input and Output devices using the bundled terminal blocks. The use of these devices, however, is optional.

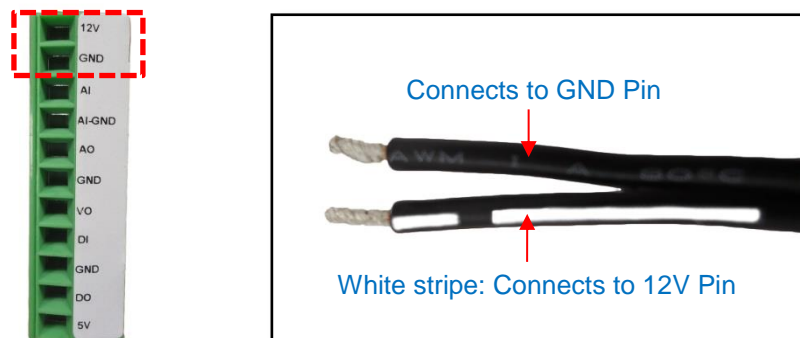
### Connecting a Power Adapter (Optional)

In case of using a non-PoE switch or your PoE switch has limited power supply, you can purchase a power adapter and directly connect the camera to a power outlet. The power adapter must be connected to the supplied terminal block before use.

**NOTE:** The power adapter is not bundled in the package.

To do this, follow the procedures below:

1. Loosen the screws of the **12V** and **GND** pins of the power terminal block.
2. Take note that a standard power adapter cable has two (2) different wires:



3. Connect the wire with the white stripe to the **12V** pin and the other to the **GND** pin.
4. Tighten the screws of the **12V** pin and the **GND** pins to secure the wire connection.
5. Set the prepared power adapter for connection later.

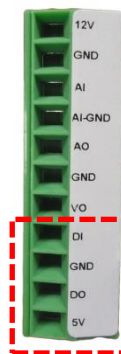
## Connecting the DI/DO and Audio Devices (Optional)

Depending on your surveillance needs, you may connect digital input / output or audio input / output devices to your camera. The camera comes with one (1) terminal block for both digital and audio input/output devices.

### How to Connect DI/DO Devices

Digital Input (DI) devices can be used to notify the camera about an activity in the camera site. DI can be triggers of events. For example, you can connect a “panic button” to the camera; as such when the panic button is pressed, the alarm signal will be sent through the camera. Other common DI device applications are emergency button, smoke detector, passive infrared sensor, etc.

Digital Output (DO) devices are external devices that are activated by the camera upon an event inside the camera. For example, you can connect an “alarm horn” to the camera; as such when an event occurs inside the camera (e.g. detected intruder), the alarm horn will sound. Other common DO device applications are motion-triggered lights, electric fence, magnetic door locks, etc.



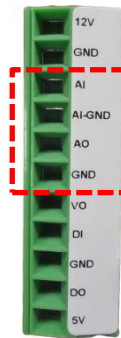
To connect digital input / output devices (DI/DO), map the pins to one of the pin combinations below:

Device	Pin	Mapping Instructions
Digital Output (DO)	5V	Connect the wires of the output device to <b>5V</b> and <b>DO</b> .
	DO	
Digital Input (DI)	GND	Connect the wires of the input device to <b>GND</b> and <b>DI</b> .
	DI	

**NOTE:** For more information on DI/DO connections, please refer to the Knowledge Base article [All about Digital Input and Digital Output](http://www.acti.com/kb/detail.asp?KB_ID=KB20091230001) downloadable from the link below ([http://www.acti.com/kb/detail.asp?KB\\_ID=KB20091230001](http://www.acti.com/kb/detail.asp?KB_ID=KB20091230001)).

### How to Connect Audio and Video Devices

Audio input / output devices, such as an active microphone or speaker can be connected to the camera using the supplied terminal block. As well as an analog video output.



To connect audio devices, map the pins to one of the pin combinations below:

Device	Pin	Mapping Instructions
Audio Output (AO)	GND	Connect the wires of the audio output device to <b>GND</b> and <b>AO</b> .
	AO	
Audio Input (AI)	AI-GND	Connect the wires of the audio input device to <b>AI-GND</b> and <b>AI</b> .
	AI	

**NOTE:** For more information about AUDIO in connections, please refer to the Knowledge Base article [How to Use Audio-in of ACTi Cameras](http://www.acti.com/support/KnowledgeBase/outside/detail.asp?KB_ID=KB20100114003), downloadable from the link below ([http://www.acti.com/support/KnowledgeBase/outside/detail.asp?KB\\_ID=KB20100114003](http://www.acti.com/support/KnowledgeBase/outside/detail.asp?KB_ID=KB20100114003)).

## How to Use a Memory Card

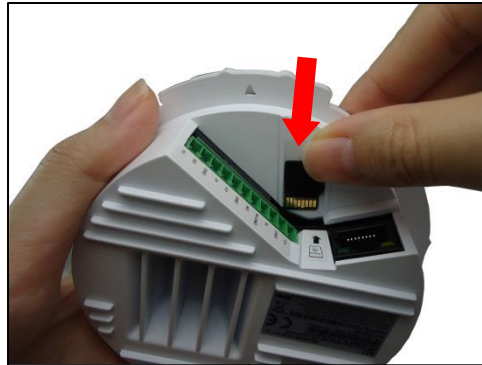
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The camera supports local video recording or saving of snapshots to a memory card.

**NOTE:** Supports microSDHC and microSDXC cards.

### How to Insert the Memory Card

Insert a memory card into the card slot with the metallic contacts facing down the camera. Push the card until it clicks into place.



### How to Remove the Memory Card

In case there is a need to remove the card, make sure to access the camera Web Configurator to safely “unmount” the card first (see the camera Firmware manual for more information). Once unmounted from the firmware, push the card to eject it from the slot.

# Accessing the Camera

## Configure the IP Addresses

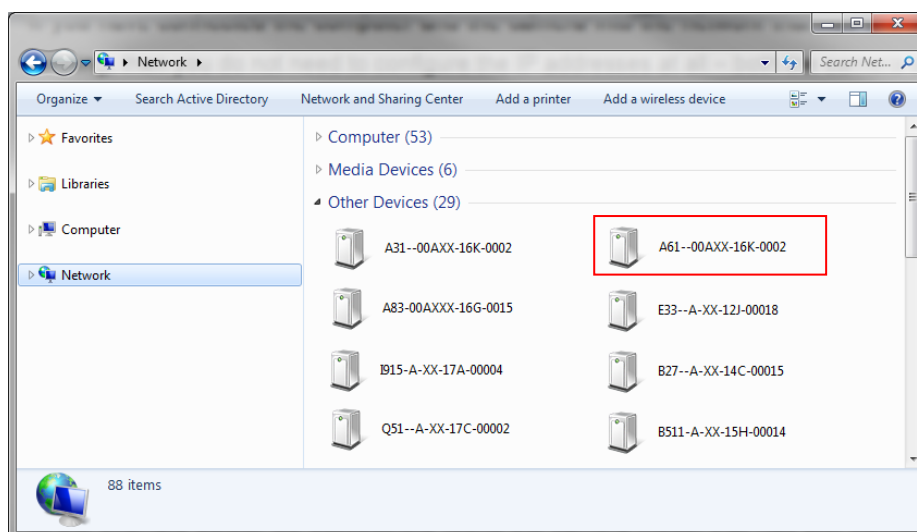
In order to be able to communicate with the camera from your PC, both the camera and the PC have to be within the same network segment. In most cases, it means that they both should have very similar IP addresses, where only the last number of the IP address is different from each other. There are 2 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 order 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 had just connected to the network.

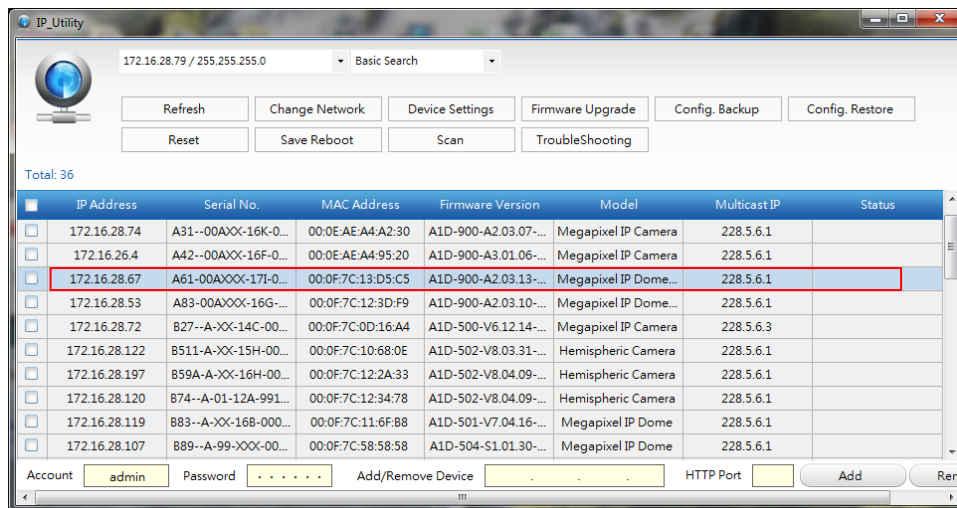


Double-click on the camera model name, the default browser of the PC is automatically launched and the IP address of the target camera is already filled in the address bar of the browser.

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](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.

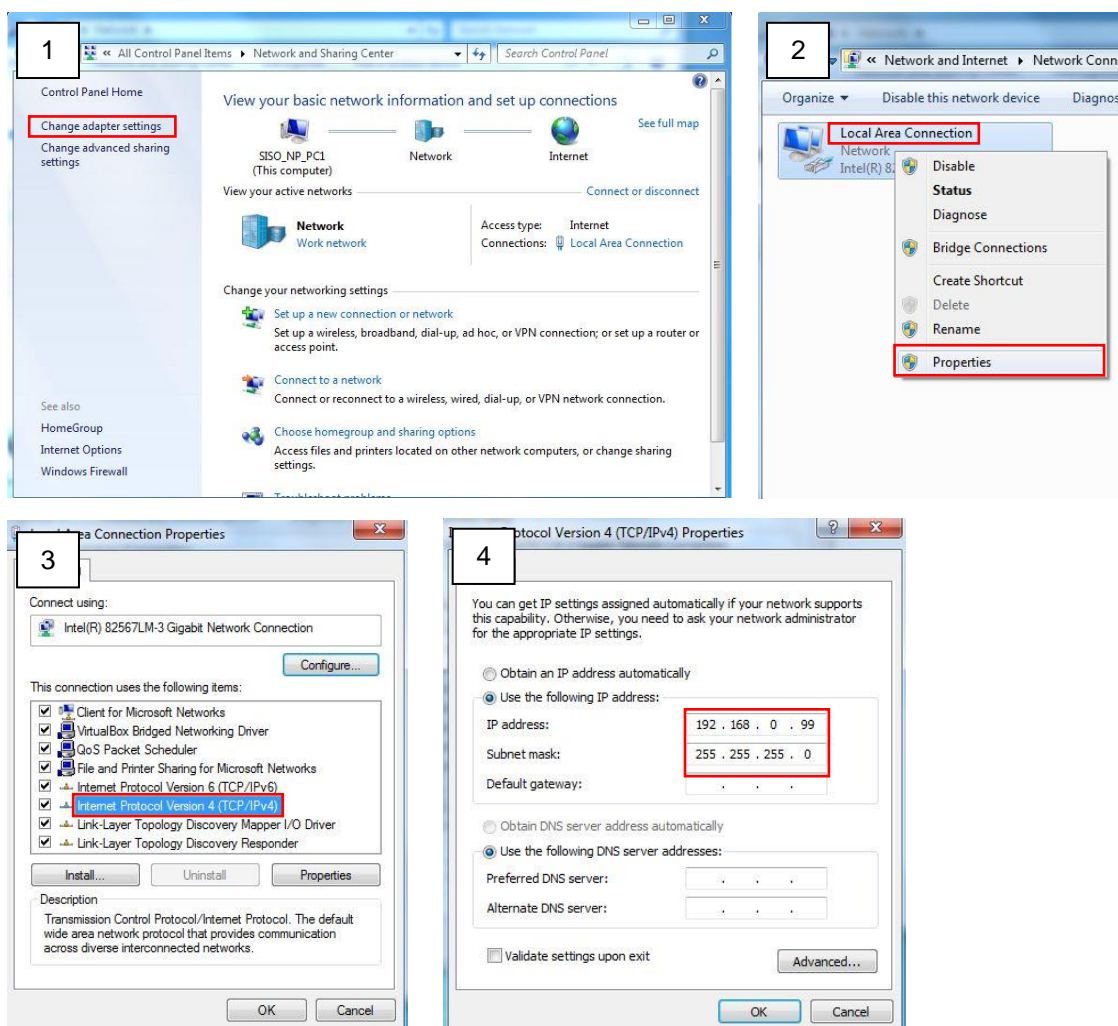
When the camera is plugged into network and it does not detect any DHCP services, it will automatically assign itself a default IP:

**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.

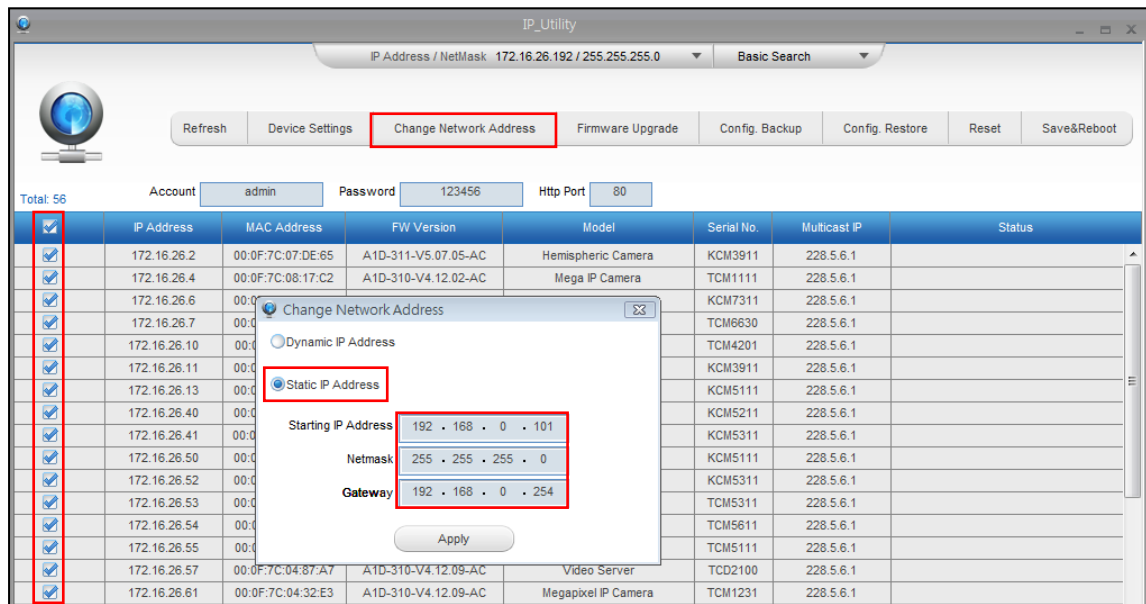
## Manually adjust the IP address of the PC:

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:



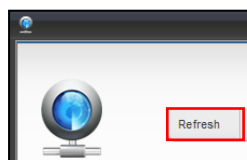
**Manually adjust the IP addresses of multiple cameras:**

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

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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 **Microsoft Internet Explorer** to access the camera.

The browser functionality comparison:

Functionality	Internet Explorer
Live Video	Yes
Live Video Area Resizable	Yes
PTZ Control	Yes
Capture the snapshot	Yes
Video overlay based configuration (Motion Detection regions, Privacy Mask regions)	Yes
All the other configurations	Yes

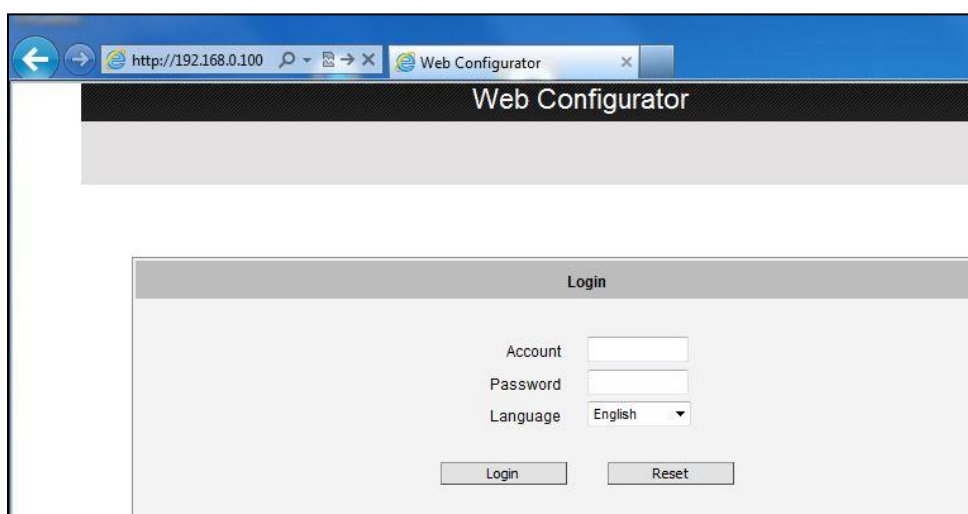
When using Internet Explorer browser, the ActiveX control for video stream management will be downloaded from the camera directly – the user just has to accept the use of such control when prompted so. No other third party utilities are required to be installed in such case.

**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.

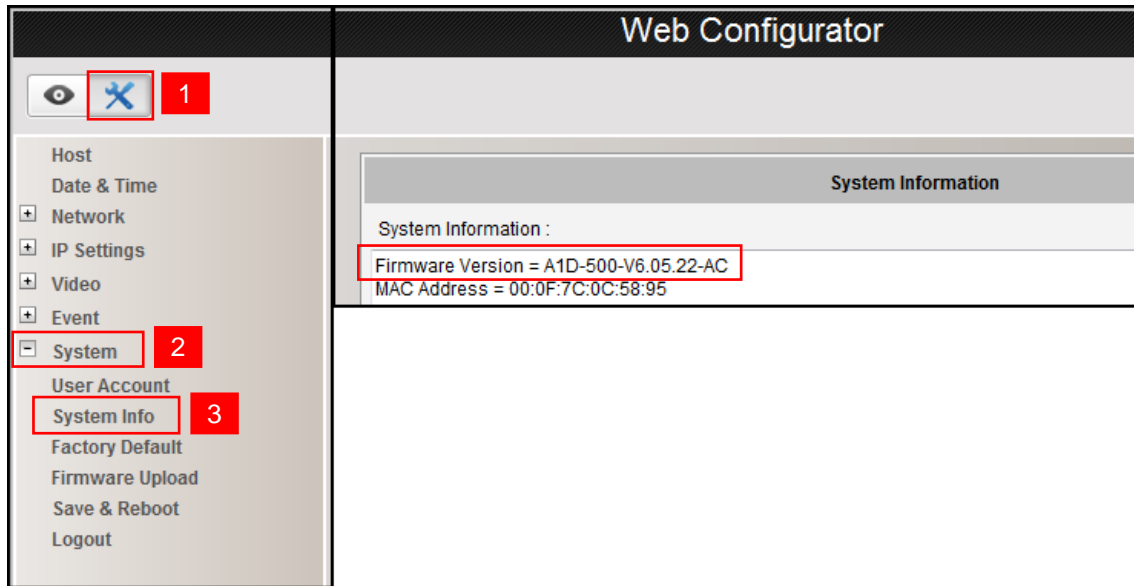


Before logging in, you need to know the factory default Account and Password of the camera.

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**.



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