



Outdoor Speed Dome Hardware Manual

A950

2018/12/20



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 instructions 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

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

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

Water and Moisture

Install other devices (such as PoE injector, alarm, etc.) that will be used with the camera 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 the 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

List of Models

This hardware manual contains the following model:

A950		8MP Outdoor Speed Dome with D/N, Adaptive IR, Extreme WDR, ELLS, 22x Zoom Lens
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Package Contents

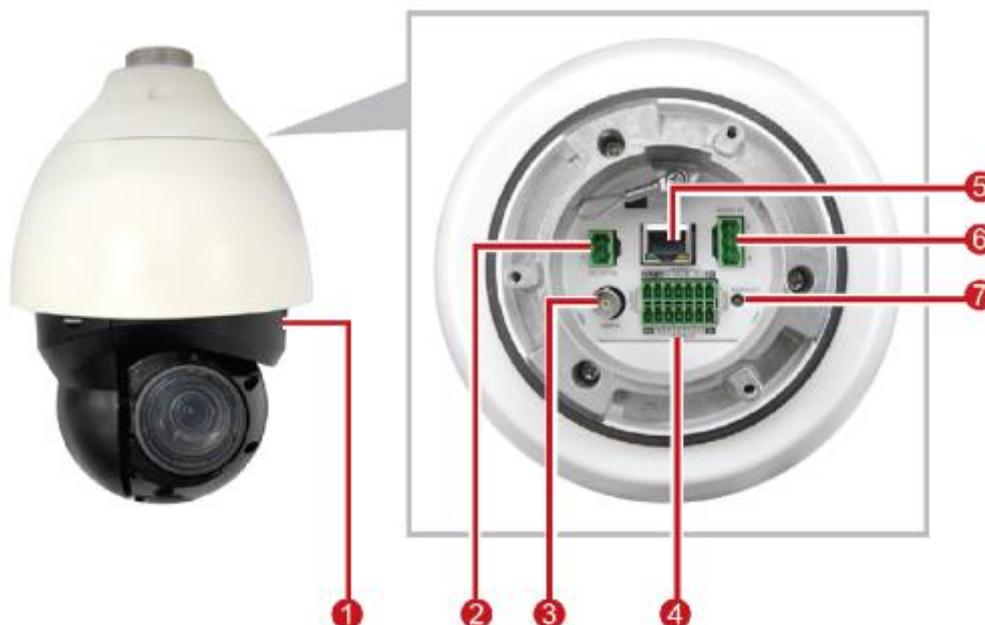
Check if the following items come with the camera package. If any of them is missing, please contact your local sales agents or the [Customer Help Desk \(CHD\)](#).

Camera	Power Cord	Power Adapter	Universal Converter
			
Terminal Blocks (x3)	Screw	Warranty Card	
			

NOTE: The above pictures are for reference only; actual items may slightly vary.

* Depending on territory, the package may come with a power adapter or a PoE Injector.

Physical Description



No.	Item	Description
1	Memory Card Slot	Insert a memory card into this slot for local recording purposes. See Insert the Memory Card (Optional) on page 12 for more information. NOTE: Supports microSDXC cards only. Need a microSD card adapter to connect to camera.
2	DC 12V Power Input	Connects to the bundled power adapter to supply power to the camera. See Power Connection on page 18 .
3	Analog Video Output Connector	Connects to an analog video output monitor using BNC connector.
4	Audio Input / Output, Digital Input / Output, Serial Port Connector	This jack connects to an audio input / output device, digital input / output, and serial devices. See Audio, Digital Input / Output and Serial Connection on page 20.
5	Ethernet Port	The Ethernet port connects to a network and used for UPOE connection.
6	AC 24V Power Input	This jack connects to an AC 24V power source. See AC24V on page 19 for terminal block mapping.
7	Reset Button	The reset button is used to restore the camera factory default settings. Using a tool, press and hold for at least 20 seconds to reset.

*Please contact the manufacturer for compatible PoE injector.

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



NOTE: DC12V power jack and AC24V power connector cannot be used at the same time in case of unexpected damage.



NOTE: It is not recommended to record with the SD 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 SD card for information regarding the reliability and the life expectancy.

Mounting Options

There are several mounting options that you can use to install the camera. Below are some examples.

For more information about mounting solutions and accessories, please visit our website (<http://www.acti.com/mountingselector>).

Mount Types	Accessories	
Pendant Mount	Suitable when mounting the Outdoor PTZ on a hard ceiling.	
	PMAX-0119	
Straight Wall Mount	Suitable when mounting the Outdoor PTZ on a straight wall.	
	PMAX-0324	
Vertical Pole Mount	Suitable when mounting the Outdoor PTZ on a vertical pole.	
	PMAX-0514 	+ 

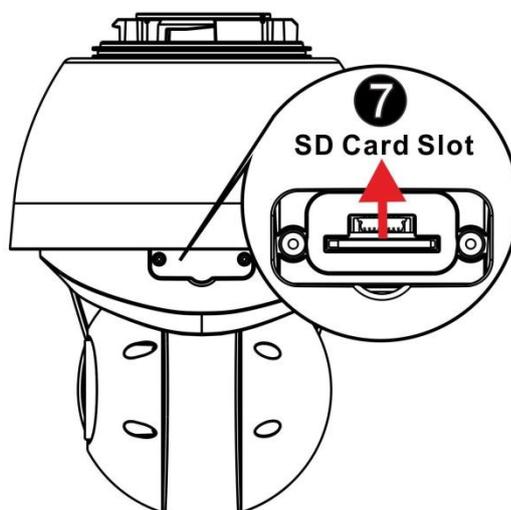
Before Installation

This section describes the procedures that can be done to prepare the camera prior to installation. Do the following according to application needs.

Insert the Memory Card (Optional)

If a memory card will be used for local recording, do the following to insert the memory card.

1. Locate the memory card slot on the side of the lens module. Loosen the two (2) screws to open the cover.



2. Insert the micro SD card into a micro SD card adapter. Then, insert the card into the slot with the metal contacts facing up the camera. Push the card until it clicks into place.

Installation Procedures

Installation procedures vary depending on the desired mounting solution. Cables may be connected first before mounting the camera or vice versa.

Below are the basic installation procedures when mounting the camera with PMAX-0324 Wall Mount with access behind the wall. For detailed information and other mounting solutions, check the website (<http://www.acti.com/mountingselector>).

NOTE: The following pictures are for reference only, actual camera and cable connections may slightly vary.

Use the Safety Strap

1. Insert the nylon spacer to M3x8 screw with spring washer-8 as **Fig.1**. Fix the screw to the anti-drop chain as **Fig.2**.



(Fig.1)



(Fig.2)

2. Open the mounting plate (red frame in **Fig.3**) Screw the anti-drop chain to the mini pendant mount and insert the chain through the pendant as **Fig.4**. DO NOT fasten the mounting plate back to pendant mount yet.



(Fig.3)



(Fig.4)

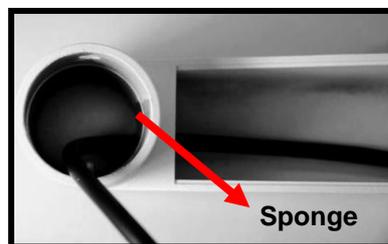
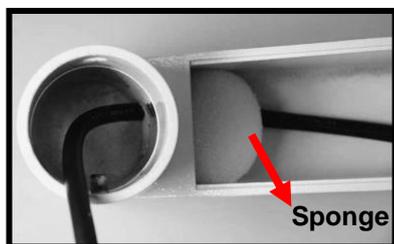
Mount the Camera

Follow the steps to mount the camera with the Wall Mount.

STEP 1

Make a cable entry hole on the wall to recess the cables. Run the Ethernet cable through the pendant mount. If there are other cables, such as power cable, alarm I/O cable or audio I/O cable, also insert them through the pendant mount.

NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the pendant mount. The sponge can be placed in two ways as shown in the illustrations below.



STEP 2

Align the screw holes on the pendant mount with the drilled holes and fix the pendant mount to the wall with four screws.

STEP 3

Coat the PTFE thread seal tape (not supplied) to the thread of mounting kit around five times for waterproof purpose as **Fig. 5**.



(Fig.5)

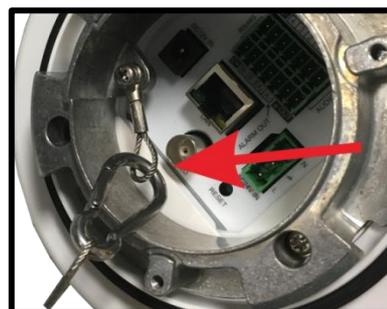
Then, thread the Ethernet cable and other cables through the mounting kit and fix the mounting kit to the pendant mount.



(Fig.6)

STEP 4

Hook up the anti-drop ring of the camera with the anti-drop chain.



(Fig.7)

STEP 5

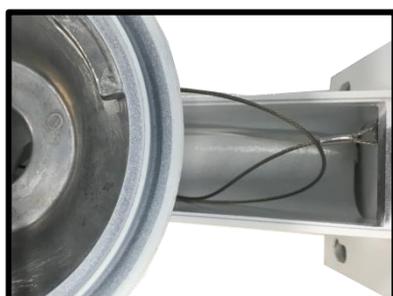
Connect the Ethernet cable to the RJ-45 connector of the camera and other connections like power, alarm I/O and audio I/O connections, please see **Cable Connections** for pin definition.



(Fig.8)

STEP 6

Slightly pull the anti-drop chain and other cables into the pendant tube. Then screw the mounting plate back to the mini pendant mount.



(Fig.9)



(Fig.10)

STEP 7

Fix the camera to the mounting kit with the supplied screw and washers.



(Fig.11)

Installation completed.



(Fig.12)

Cable Connections

This section describes the procedures in preparing and connecting the bundled power adapter, optional Digital Input and Digital Output (DI/DO), such as alarms, sensors, etc., and Audio Input and Output devices. The use of these devices, however, is optional.

Note that the camera itself is waterproof, however take note that the cable connections are not. Ensure to adapt proper waterproofing methods to protect the cable connections from water and other environmental factors that may damage the cable or the camera.

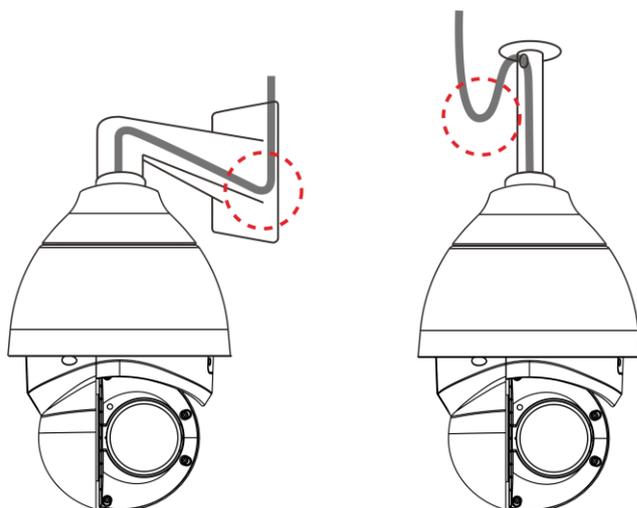
Water might still enter the camera if it is being improperly installed. Please make sure the warnings below are strictly followed when installing the camera.



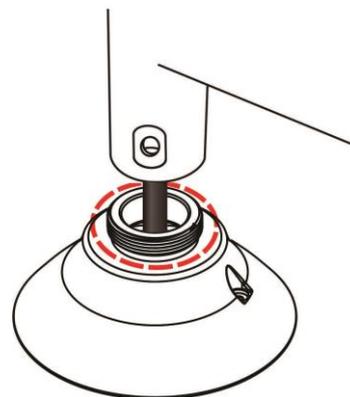
NOTE: This camera must be installed by qualified personnel and the installation should conform to all local codes.

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) needs to be sealed with thread seal tape to avoid water from entering the camera.

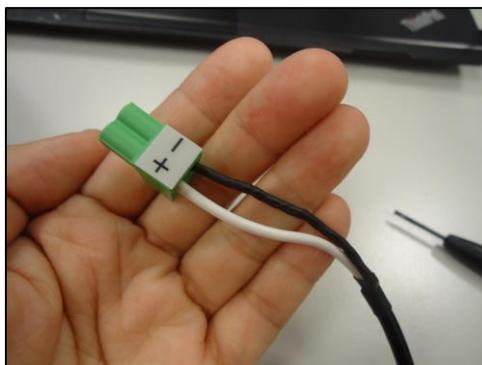


Power Connection

Users can use an Ethernet cable and connect it to the RJ-45 port of the camera and a UPoE 60W switch. However, if using a non-UPOE connection, you can power up the camera using DC12V or AC24V then connect the camera to the power outlet.

DC12V

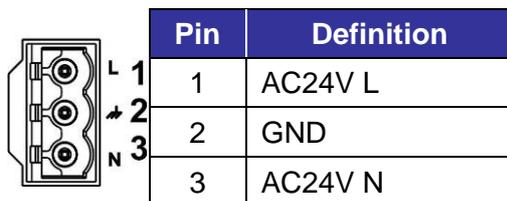
The camera comes with a bundled DC12V power adapter and cord. Connect the power adapter to 2-pin terminal block: white cable to the positive (+) pin and the black cable to the negative (-) pin. Then, connect the power adapter with the power cord to a power source outlet.



When users connect DC12V power jack and the RJ-45 port at the same time, the power input comes from the DC12V connector. If the DC12V power source fails, the camera will switch power input seamlessly to the RJ-45 port until the DC12V power source is restored.

AC24V

Refer to the diagram and pin definition below for AC24V power connection.



Ethernet Cable Connection

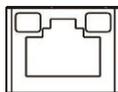
To connect one end of the Ethernet cable to the RJ-45 connector of the camera, and plug the other end of the cable to the network switch or PC.



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



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

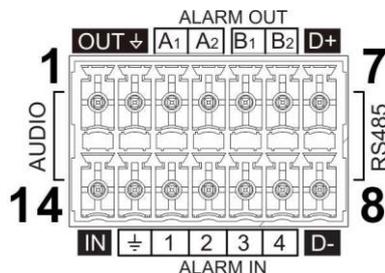


Green Link Light indicates good network connection.

Orange Activity Light flashes for network activity indication.

Audio, Digital Input / Output and Serial Connection

Please refer to the diagram and pin definition below for audio, digital input/output and serial (RS-485) connection:



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio Out	5	Alarm Out B1	9	Alarm In 4	13	GND (Alarm I/O & RS-485)
2	GND (Audio I/O)	6	Alarm Out B2	10	Alarm In 3	14	Audio In
3	Alarm Out A1	7	RS-485 D+	11	Alarm In 2		
4	Alarm Out A2	8	RS-485 D-	12	Alarm In 1		

Accessing the Camera

Configure the IP Addresses

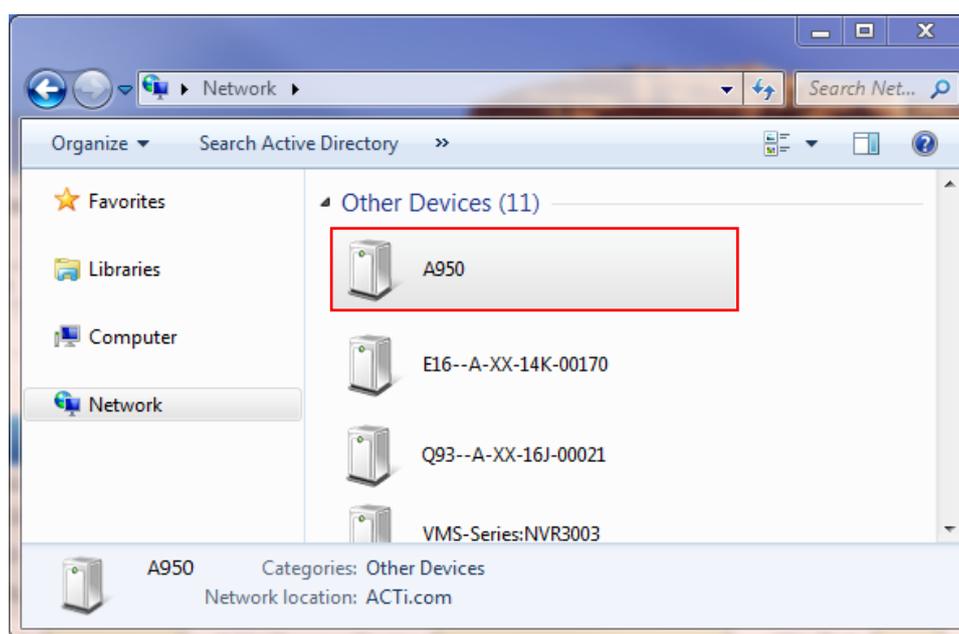
In order to be able to communicate with the camera from your PC, both the camera and the PC have to be within the same network segment. In most cases, it means that they both should have very similar IP addresses, where only the last number of the IP address is different from each other. There are 2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



Double-click the mouse 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.

Use the default IP address of the camera

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

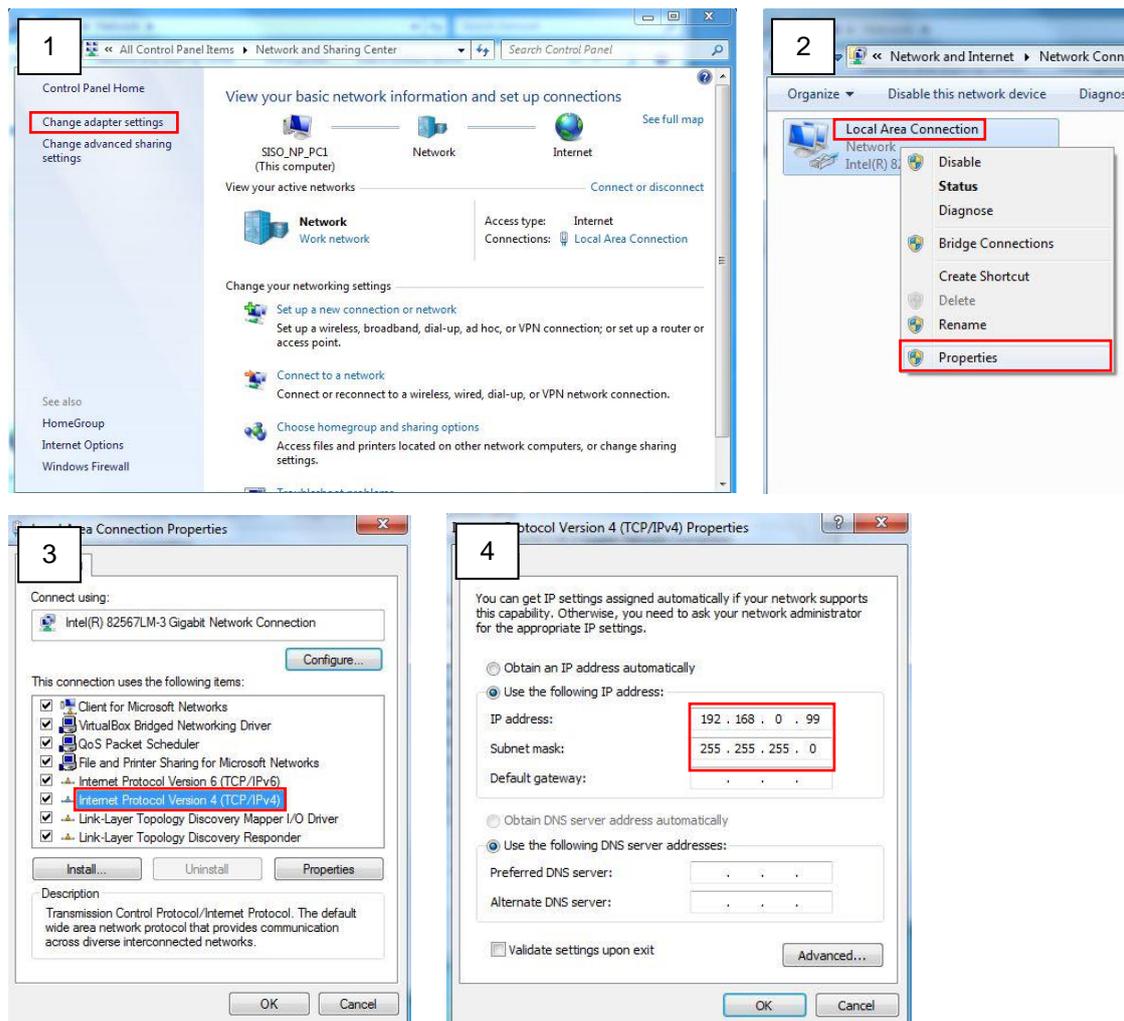
When the camera is plugged into the network and it does not detect any DHCP services, it will automatically assign itself a default IP:

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:



Access the Camera

Now that the camera and the PC both have their unique IP addresses and are under the same network segment, you can use a web browser on the PC to access the camera.

You can use **Microsoft Internet Explorer** 11.0 (recommended), Chrome, Firefox, Safari to access the camera.

ActiveX control for video stream management may 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 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**

For further operations, please refer to the **Firmware User's Manual**.



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