



Dome Camera

Hardware Manual

Z81, Z82, Z87

2022/03/09



ACTi
Connecting Vision

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Precautions

Read these instructions

Read all the safety and operating instructions before using this product.

Heed all warnings

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 product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Trademarks

ACTi and ACTi logo are registered trademarks of ACTi Corporation. All other names and products used in this manual are registered trademarks of their 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. ACTi will not be held responsible for any typographical or technical errors and reserves the right to make changes to the product and manuals without prior notice.

Regulatory Compliance

FCC Part 15

This equipment has been tested and found to comply with the limits for digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

LVD/EMC Directive



This product complies with the European Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

WEEE Directive–2012/19/EU



The product this manual refers to is covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.

Safety and Compliance Information

Installation and removal of the unit and its accessories must be carried out by qualified personnel. You must read all of the Safety Instructions supplied with your equipment before installation and operation.

Installation

- This device is a class A product and may cause radio interference. Take measures if necessary.
- Make sure the camera operates in an environment where the temperature and humidity meet requirements. Keep the camera from excessive pressure, vibration, moisture, dust, and intensive electromagnetic radiation.
- Use a power adapter or a PoE device that meets requirements. Otherwise, the device may be damaged.
- Make sure the length of the power cable between the power adapter and the camera is not too long, otherwise the voltage of the camera is lowered, causing the camera to work abnormally. If it is required to lengthen the power cable, lengthen the cable between the power adapter and the mains.
- Do not hold the tail cable by hand for weight bearing. Otherwise, the cable connector of the camera could be loosened.
- Do not cut the tail cable. Exposed tail cables may cause short circuit and damage the camera.
- When connecting to an external interface, use an existing connection terminal, and ensure that the cable terminal (latch or clamp) is in good condition and properly fastened. Ensure that the cable is not tense during mounting, with a proper margin reserved to avoid poor port contact or loosening caused by shock or shake.
- The end of the tail cable must be kept under good protection. Take waterproof measures to protect the tail cable.
- During the process of transportation, special attention is required for the protection of the transparent dome cover to prevent friction, scratch and contamination, etc. In order to keep the cover clean, do not remove the protective film on the cover during mounting. After mounting is finished, remove the film before the device is powered on.
- Contact professionals for maintenance information. Do not attempt to dismantle the device by yourself. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.

Maintenance

- If there is dust on the front glass surface, remove the dust gently using an oil-free brush or a rubber dust blowing ball.
- If there is grease or a dust stain on the front glass surface, clean the glass surface gently from the center outward using anti-static gloves or an oil-free cloth. If the grease or the stain still cannot be removed, use anti-static gloves or an oil-free cloth dipped with detergent and clean the glass surface gently until it is removed.
- Do not use organic solvents, such as benzene or ethanol when cleaning the transparent dome cover.






- Never look at the transmit laser while the power is on. Never look directly at the fiber ports and the fiber cable ends when they are powered on.
- Use of controls or adjustments to the performance or procedures other than those specified herein may result in hazardous laser emissions.

Introduction

List of Models

This hardware manual contains the following models:

Z81		2MP Outdoor Zoom Dome with D/N, Adaptive IR, Extreme WDR, SLLS, 4.4x Zoom Lens
Z82		4MP Outdoor Zoom Dome with D/N, Adaptive IR, Extreme WDR, SLLS, 4.4x Zoom Lens
Z87		4MP Outdoor Zoom Dome with D/N, Adaptive IR, Superior WDR, SLLS, 4.3x Zoom Lens

Package Contents

Contact your local dealer if the package is damaged or incomplete. The attachments may vary with models, please see the actual model for details.

- Camera
- Quick Installation Guide
- Screw Pack
- Drill Template
- Cable gland

Physical Description

Z81 / Z82



Item		Description
1	DC 12V Power Input Jack	This connector is used to connect to a DC 12V power adapter if a non-PoE network connection will be used.
2	Ethernet Port	Connects to a network using an Ethernet cable.
3	Reset Button	Press and hold to reset the camera to its default factory settings.
4	Memory Card Slot	Insert a memory card into this slot for local recording purposes. NOTE: Supports microSDHC and microSDXC cards.

Z87

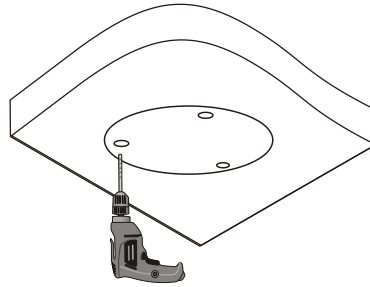


Item		Description
1	Memory Card Slot	Insert a memory card into this slot for local recording purposes. NOTE: Supports microSDHC and microSDXC cards.
2	Reset Button	Press and hold to reset the camera to its default factory settings.
3	Built-in Microphone	Receives audio input.
4	DC 12V Power Input Jack	This connector is used to connect to a DC 12V power adapter if a non-PoE network connection will be used.
5	Ethernet Port	Connects to a network using an Ethernet cable.

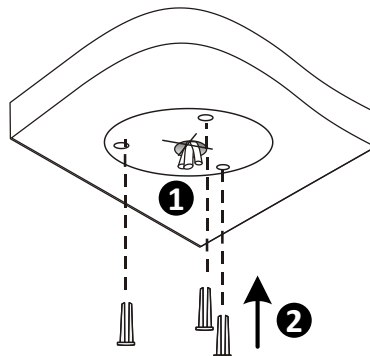
Installation Procedures

Mounting on the Ceiling

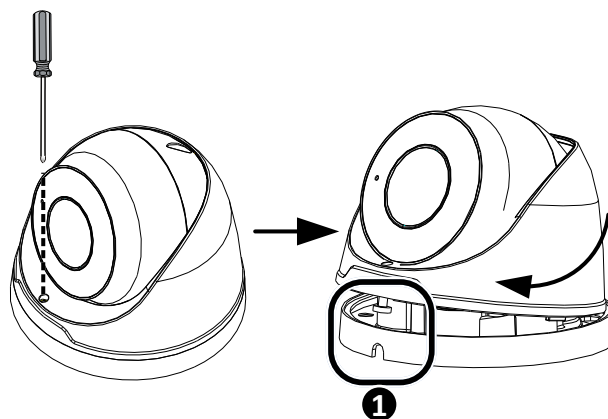
1. Locate the positions of the holes; paste the drill template stickers on the surface and then use a $\text{Ø}6\text{-}6.5\text{mm}$ drill bit to drill 30 mm-depth guide holes according to the positions marked by drill template.



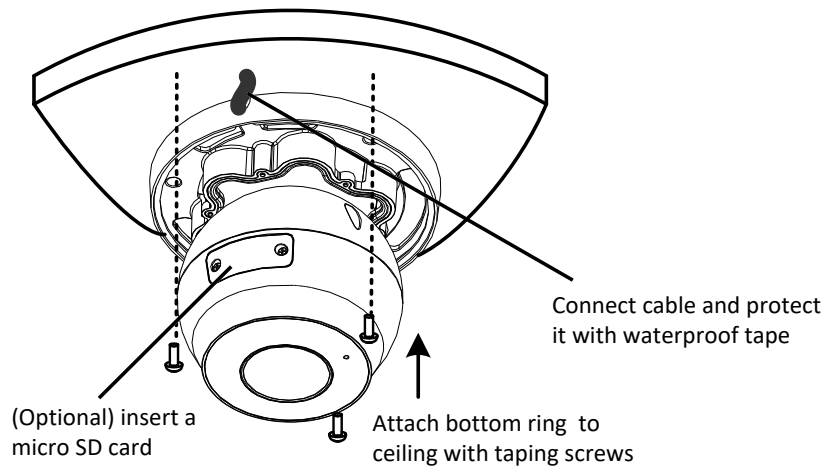
2. Insert the plastic anchors and drill a hole to lead the cables out of the ceiling.



3. Loosen the fixing screw, then remove the housing.

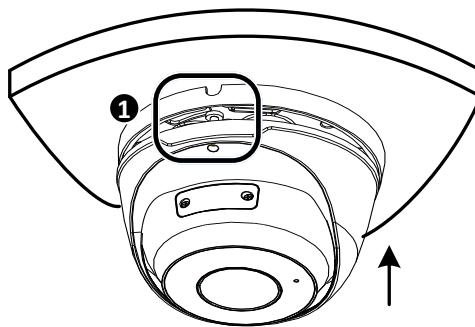


4. Connect the cable and then secure the mounting base.

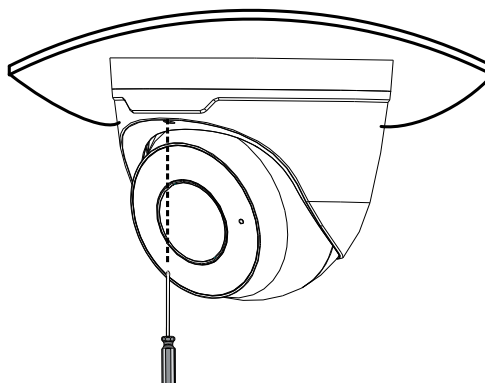


5. Mount the camera to the base.

Adjust the housing to the position shown in figure figure ❶ then push and turn it to anywhere but ❶.

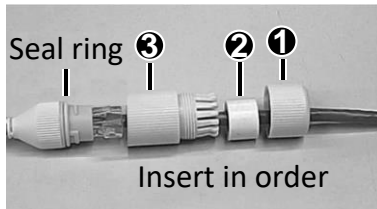


6. Adjust the lens viewing direction, and then tighten the screw.



Waterproof RJ-45 Connector

NOTE: The preceding installation process is for concealed installation, during which holes are punched on the wall and cables are penetrated into the wall. If open installation is adopted, cables are not penetrated into the wall but threaded out from the outlet on one side of the base.



Attach the seal ring to the Ethernet interface. Mount the waterproof components in order. Then insert the cable into the Ethernet interface and screw the waterproof bolt in.

NOTE: You can crimp the inner wires of the cable with the RJ45 plug first and then cover the waterproof components. You may also cover the waterproof components first.

Waterproof Tail Cable

Connect the tail cables and then take the following steps to protect the tail cables from water using waterproof tapes. The figures are for your reference only.



Connect the tail cables, and protect the cables and cable connections using insulating tapes. Then wrap all the tail cables together using insulating tapes.



Choose a start point for waterproof tapes and protect the tail cables using waterproof tapes.

NOTE:

- Avoid short circuit when insulating the cables.
- Use self adhesive waterproof tapes that will stick together with the twisted cables.
- Tighten waterproof tapes when wrapping the cables and make sure the cable connections are fully covered. Wrap with take and protect unused cable connections, as well.
- You are recommended to put the waterproof cables in a waterproof junction box which needs to be purchased separately.

Access 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.

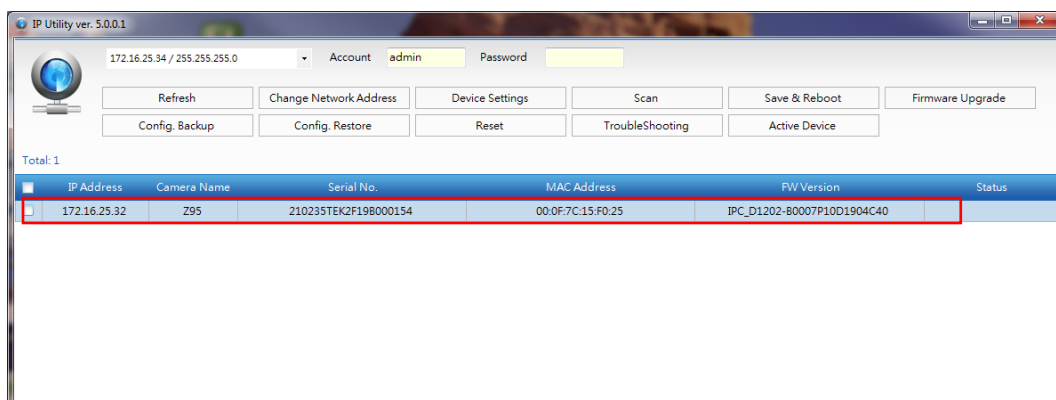
Using DHCP Server to Assign IP Addresses

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.

If you work with our cameras regularly, **there is 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 see the camera model in the list. Double-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.

Using the Default Camera IP Address

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.

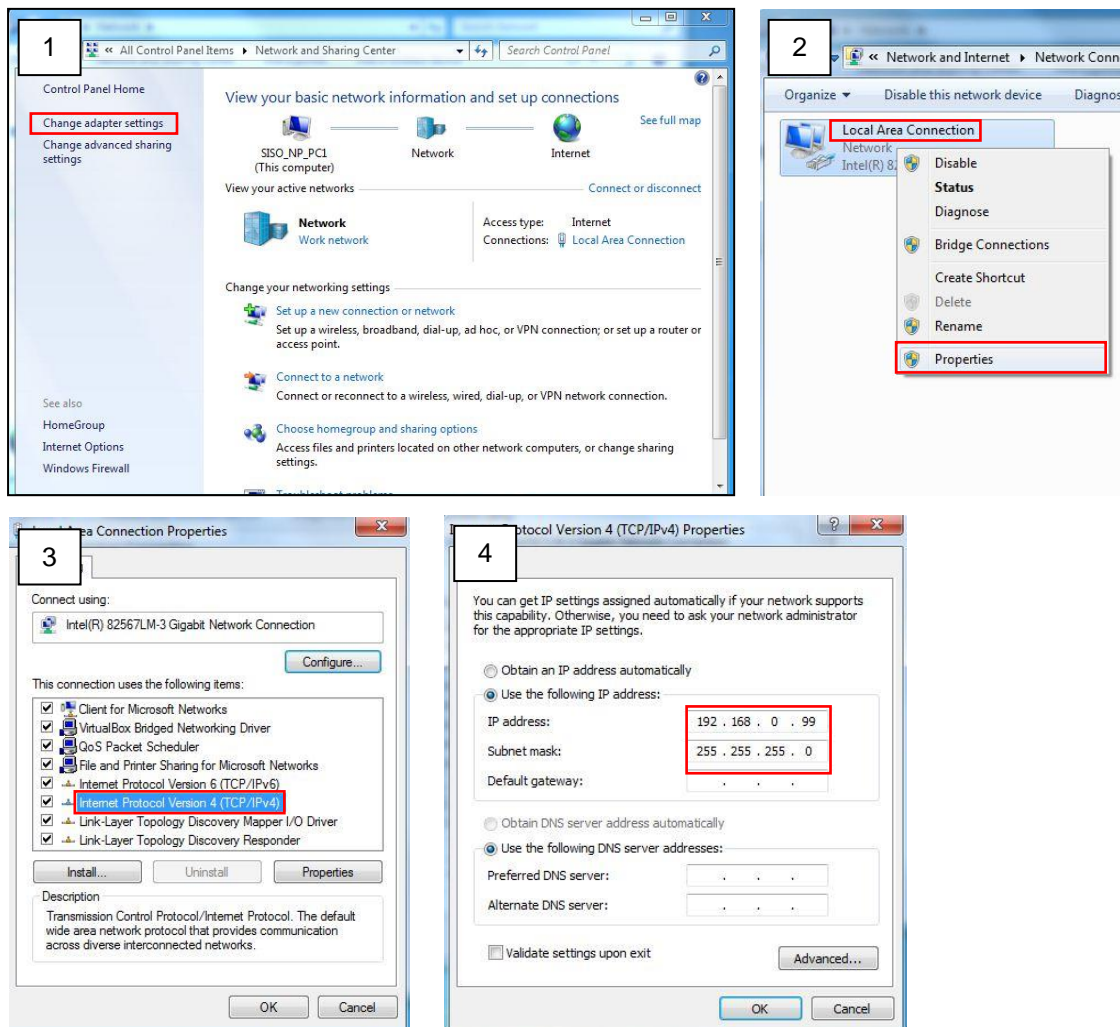
When the camera is plugged into network and it does not detect any DHCP services, it will automatically assign itself a default IP:

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.

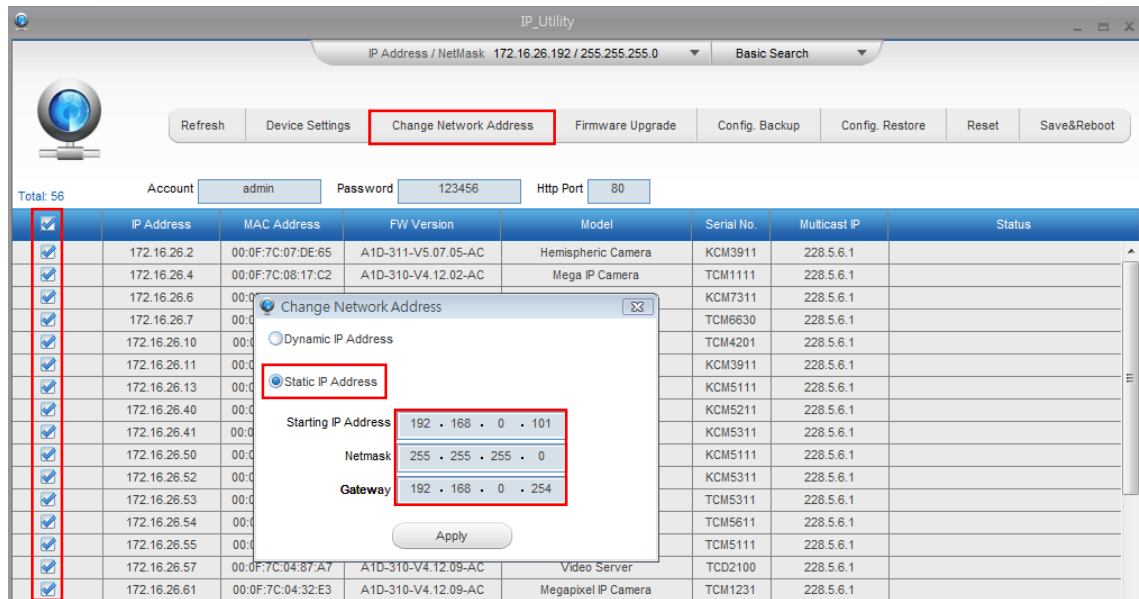
Manually adjust the IP address of the PC:

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:



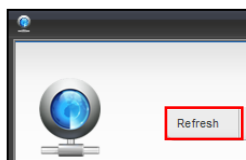
Manually adjust the IP addresses of multiple cameras:

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 **Microsoft Internet Explorer** to access the camera

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.

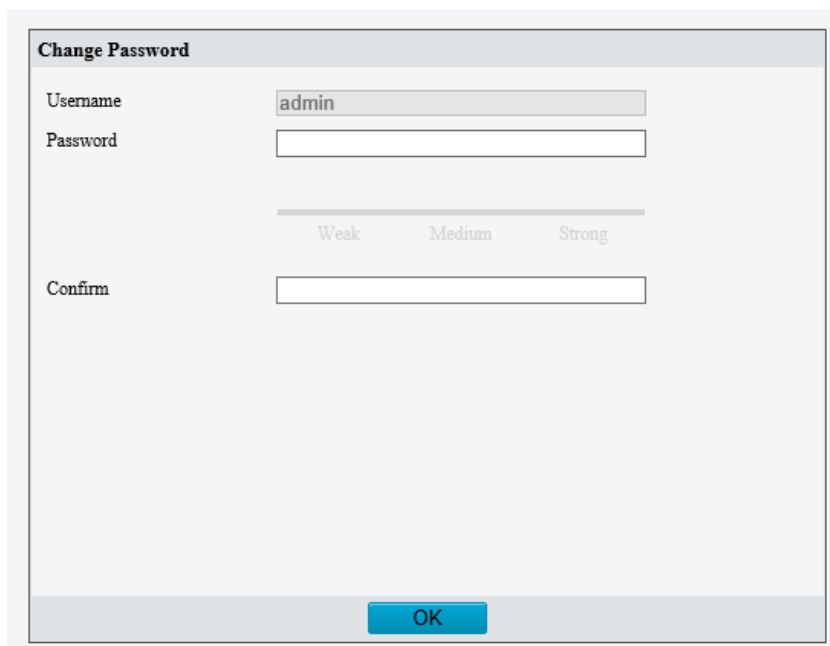
NOTE: If Windows does not prompt you to install ActiveX, follow these steps to turn off **UAC**: Click the **Start** button, and then go to **Control Panel**. In the search box, type **UAC**, then click **Change User Account Control Settings**. Move the slider to **Never Notify** position, and then click **OK**. After UAC is turned off, log in again.

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

Before logging in, you need to setup the root Account and Password of the camera. The password must contain upper and lower case letters, numbers and special characters.



Change Password

Username

Password

Weak Medium Strong

Confirm

OK

Then use this newly setup **Account** and **Password** to login to the Web Configurator.



The screenshot shows the login interface of the ACTi Web Configurator. At the top left is the ACTi logo. In the top right corner, there is a language dropdown menu set to "English". The main form contains the following elements:

- Username:** A text input field containing the text "admin".
- Password:** A password input field with masked characters (dots) and a toggle icon (an eye) on the right side.
- Live View:** A checkbox labeled "Live View" which is currently checked.
- Login:** A button labeled "Login".
- Reset:** A button labeled "Reset".



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