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› [ACTi](#) /

› [ACTi A821 6MP Outdoor Zoom Dome Camera User Manual](#)

## ACTi A821

# ACTi A821 6MP Outdoor Zoom Dome Camera User Manual

Model: A821

## 1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the ACTi A821 6MP Outdoor Zoom Dome Camera. The ACTi A821 is a high-performance surveillance camera designed for outdoor environments, featuring 6MP resolution, 5x optical zoom, superior low light sensitivity, and robust environmental protection.

## 2. SAFETY INFORMATION

- Read all instructions carefully before installation and operation.
- Ensure the power source meets the camera's requirements (DC 12V or PoE Class 3).
- Installation should be performed by qualified personnel in accordance with local electrical codes.
- Do not expose the camera to extreme temperatures outside its operating range (-40°C to 60°C).
- Avoid direct exposure of the lens to strong light sources for extended periods.
- Do not attempt to disassemble or modify the camera, as this will void the warranty.

## 3. PACKAGE CONTENTS

Verify that all items are present in the package:

- ACTi A821 6MP Outdoor Zoom Dome Camera
- Installation Guide
- Mounting Hardware (screws, anchors, etc.)



**Figure 1:** The ACTi A821 6MP Outdoor Zoom Dome Camera. This image displays the dome-shaped camera unit, typically mounted on a ceiling or wall, with its clear protective cover revealing the internal lens assembly.

## 4. PRODUCT FEATURES

The ACTi A821 camera incorporates advanced features for reliable outdoor surveillance:

- **6 Megapixel Resolution:** Delivers high-definition video for clear image capture.
- **Day & Night Functionality with IR LED:** Automatically switches between color and black-and-white modes, supported by infrared LEDs for visibility in complete darkness up to 85 meters.
- **Superior Low Light Sensitivity:** Achieves clear images in minimal ambient light conditions (0.003 lux in color).
- **5x Optical Zoom Lens:** Features an f2.7-13.5mm/F1.6 auto-focus lens, allowing for flexible field-of-view adjustments (102.1° to 34.5° horizontal).
- **Extreme WDR (150dB):** Wide Dynamic Range technology ensures balanced exposure in scenes with both very bright and very dark areas.
- **H.265/H.264 Video Compression:** Efficient video encoding reduces bandwidth and storage requirements.
- **3D Digital Noise Reduction (DNR):** Enhances image clarity by reducing visual noise, especially in

low light.

- **Audio Support:** 2-way audio capability with line-in and line-out ports.
- **Power over Ethernet (PoE) / DC12V:** Flexible power options.
- **IP68 Weatherproof and IK10 Vandal Proof:** Designed to withstand harsh outdoor conditions and protect against physical impact.
- **Digital Input/Output (DI/DO):** For integration with external sensors or alarms.
- **Taiwan IoT Cybersecurity Certification Level 1 (TAICs):** Ensures a baseline level of cybersecurity.

## 5. SETUP

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### 5.1 Physical Installation

The ACTi A821 camera supports various mounting options:

- **Wall Mount:** Securely attach the camera to a vertical surface.
- **Pole Mount:** Utilize an appropriate bracket to attach to a pole.
- **Pendant Mount:** Suspend the camera from a ceiling or overhang.
- **Corner Mount:** Install the camera in a corner for wider coverage.

Ensure the mounting surface is strong enough to support the camera's weight (approximately 2.82 lbs) and any associated cabling. Use the provided mounting hardware or suitable alternatives for secure installation.

### 5.2 Wiring and Connections

Connect the camera using the following interfaces:

- **Ethernet Port (RJ-45 pigtail connector):** Connect to your network for data transmission and Power over Ethernet (PoE). If using PoE, no separate power adapter is needed.
- **DC 12V Power Input:** If PoE is not available, connect a DC 12V power adapter (not included) to the camera's power input.
- **Audio Line-in/Line-out:** Connect external microphone and speaker for 2-way audio communication.
- **Digital Input/Output (Terminal block):** Connect external devices such as alarm sensors or relays.

After connecting, ensure all cables are properly secured and protected, especially in outdoor installations, to maintain the IP68 rating.

### 5.3 Initial Configuration

Once powered on and connected to the network, the camera can be accessed and configured using ACTi's unified software solutions. Refer to the ACTi software documentation for detailed instructions on network discovery, IP address assignment, and initial camera settings. The camera features a reset button for factory default restoration if needed.

## 6. OPERATION

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### 6.1 Basic Operation

Access the camera's live view and recorded footage through the ACTi software or a compatible network video recorder (NVR). The camera automatically adjusts its imaging parameters based on ambient light

conditions, switching between Day (color) and Night (B/W with IR) modes.

## 6.2 Advanced Features

- **Zoom and Focus:** The 5x optical zoom lens allows for remote adjustment of the field of view. The auto-focus function simplifies installation and ensures sharp images.
- **WDR (Wide Dynamic Range):** Enable Extreme WDR (150dB) in scenes with high contrast lighting to improve visibility in both bright and dark areas simultaneously.
- **IR Illumination:** The built-in IR LEDs provide illumination for clear black-and-white video in complete darkness. The IR working distance is up to 85 meters.
- **Audio:** Utilize the 2-way audio feature for communication or environmental sound monitoring.
- **Event Management:** Configure event triggers (e.g., motion detection, digital input) and define corresponding responses such as recording, notification, or activating digital outputs.
- **Viewing Angle Adjustment:** The camera allows for pan (0°-355°), tilt (0°-75°), and rotation (0°-355°) adjustments during installation to achieve the desired coverage.

## 7. MAINTENANCE

- **Cleaning:** Periodically clean the camera's dome cover with a soft, damp cloth to remove dust, dirt, or water spots that may obstruct the view. Do not use abrasive cleaners.
- **Firmware Updates:** Regularly check the ACTi website for firmware updates to ensure optimal performance, security, and access to new features. Follow the provided instructions for firmware upgrade procedures.
- **Cable Inspection:** Periodically inspect all cables and connections for signs of wear or damage, especially in outdoor environments, to maintain weatherproofing and reliable operation.

## 8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No image/video feed	No power; Network connection issue; Incorrect IP address.	Check power supply (PoE or DC 12V). Verify Ethernet cable connection. Ensure correct IP address and network settings.
Poor image quality	Dirty lens cover; Incorrect focus; Low light conditions; WDR not enabled.	Clean the dome cover. Adjust focus via software. Ensure sufficient lighting or enable IR. Activate WDR in high-contrast scenes.
Camera unresponsive	Software glitch; Network issue.	Restart the camera by cycling power. If issue persists, perform a factory reset using the reset button.
Audio issues	Incorrect audio settings; Microphone/speaker not connected or faulty.	Check audio input/output settings in the camera software. Verify external microphone/speaker connections and functionality.

## 9. SPECIFICATIONS

Model	A821
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<b>Maximum Resolution</b>	6MP (3864x2192)
<b>Application Environment</b>	Outdoor
<b>Image Sensor</b>	Progressive Scan CMOS, 1/2.7"
<b>Minimum Illumination</b>	Color: 0.003 lux; B/W: 0 lux (IR LED on)
<b>IR Working Distance</b>	85m
<b>Focal Length</b>	Zoom, f2.7-13.5mm
<b>Zoom Ratio</b>	5x optical zoom
<b>Horizontal Viewing Angle</b>	102.1° - 34.5°
<b>Digital Noise Reduction</b>	2D + 3D DNR
<b>Audio Type</b>	2-way, Line-in, Line-out
<b>Ethernet Port</b>	1x Ethernet (10/100 Base-T), RJ-45 pigtail
<b>Digital Input/Output</b>	1/1 (Terminal block)
<b>Power Source</b>	DC 12V, PoE Class 3 (IEEE802.3af)
<b>Power Consumption</b>	12.5W (PoE)
<b>Environmental Casing</b>	Weatherproof (IP68), Vandal proof (IK10)
<b>Operating Temperature</b>	-40°C ~ 60°C
<b>Dimensions</b>	5.55" x 3.9"
<b>Weight</b>	2.82 lbs

## 10. WARRANTY AND SUPPORT

For warranty information, technical support, and additional resources, please refer to the official ACTi website or contact your authorized ACTi dealer. Keep your purchase receipt for warranty claims.