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## Aqara CH-C03E

# Aqara 4MP Camera Hub G5 Pro PoE User Manual

Model: CH-C03E

## 1. PRODUCT OVERVIEW

The Aqara 4MP Camera Hub G5 Pro PoE is an advanced security camera designed for outdoor use, offering high-resolution video and intelligent detection capabilities. It functions as a central hub for your smart home ecosystem, supporting both Zigbee and Thread protocols, and integrates seamlessly with various platforms including Apple HomeKit, Alexa, and Google Home.

Key features include 4MP HD resolution, True Color Night Vision for clear low-light imaging, and a built-in dimmable spotlight for enhanced visibility and deterrence. Its powerful Neural Processing Unit (NPU) enables local AI for visual and abnormal sound detection, ensuring critical events are captured even during internet outages. The camera also prioritizes privacy with encrypted local eMMC storage and end-to-end encryption for cloud data.



Figure 1.1: Aqara 4MP Camera Hub G5 Pro PoE and its packaging, highlighting key features and compatibility.

Video 1.1: An overview of the Aqara G5 Pro Camera Hub, demonstrating its features and capabilities.

## 2. WHAT'S IN THE BOX

The Aqara 4MP Camera Hub G5 Pro PoE package includes all necessary components for installation and operation. Please verify that all items listed below are present upon unboxing.

- Aqara Camera Hub G5 Pro (PoE Version)
- Power Cable
- Tail Cover Removal Tool
- Installation Guide
- Waterproof Tail Cable Kit (PoE Exclusive)
- Screw Kit
- User Manual

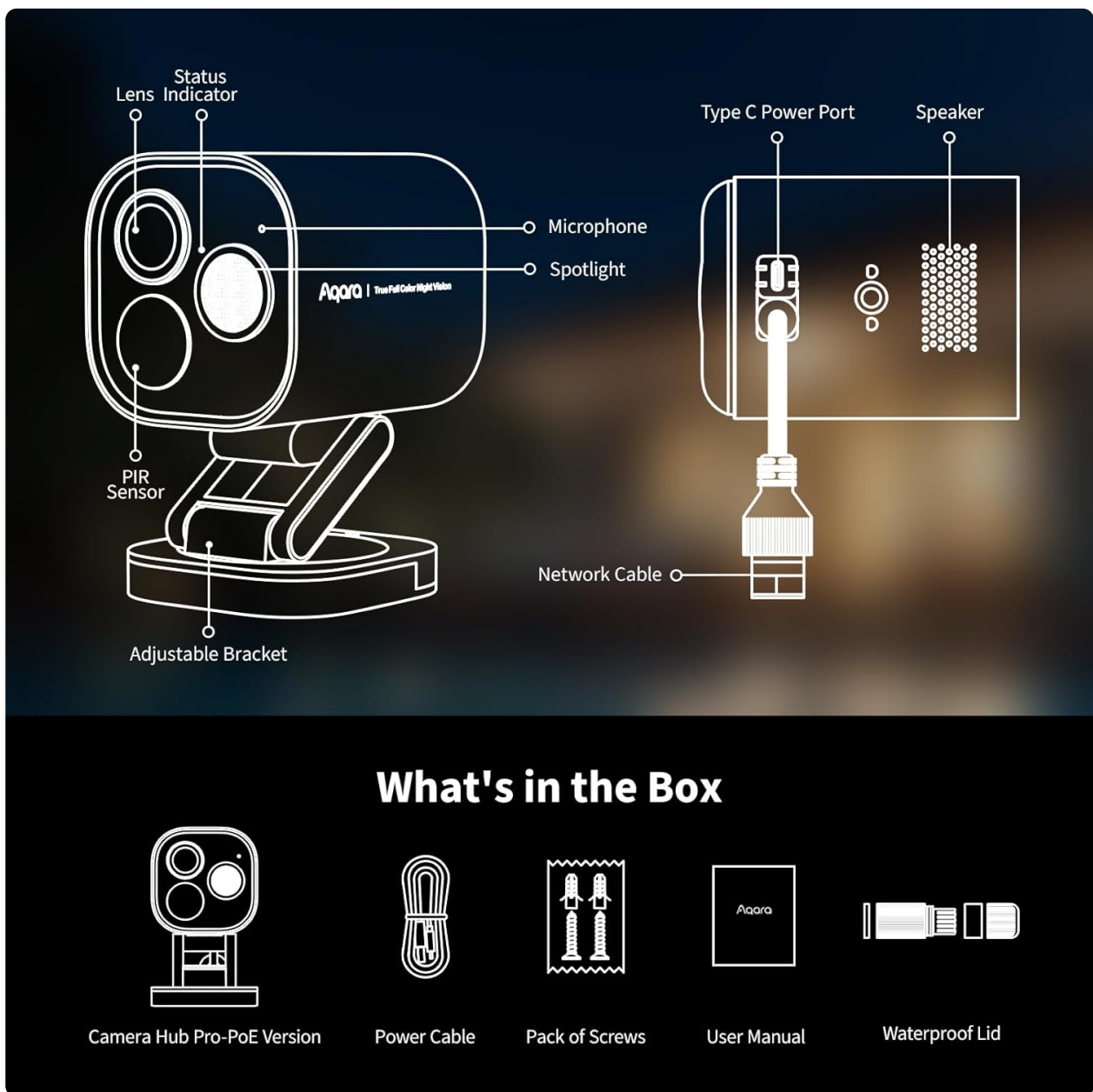


Figure 2.1: Diagram illustrating the components included in the Aqara G5 Pro PoE package.

### 3. SETUP AND INSTALLATION

The Aqara G5 Pro Camera Hub offers flexible installation options, including Power over Ethernet (PoE) for wired connectivity and power, or a standard USB-C power connection for Wi-Fi versions. Ensure you choose the appropriate method for your setup.

#### 3.1. Powering the Device

For the PoE version, connect an Ethernet cable from a PoE-enabled switch or injector to the camera's RJ45 port. This single cable will provide both power and data. For non-PoE setups or Wi-Fi versions, use a standard USB-C cable (5V2A adapter recommended) to power the device.

# Zigbee Hub & Thread Border Router



Figure 3.1: The Aqara G5 Pro PoE version, highlighting its wired connectivity for power and data.

Video 3.1: A detailed installation guide for the Aqara G5 Pro Camera Hub, covering both PoE and Wi-Fi versions.

## 3.2. Physical Placement and Mounting

The G5 Pro's rotatable stand allows for versatile placement on flat surfaces, walls, or ceilings. Choose a location that provides an optimal field of view (133° FOV) for the area you wish to monitor.

- **Flat Surface Placement:** Place the camera on any stable, flat surface, such as a shelf or table, ensuring it has a clear view.
- **Wall Mounting:** Use the provided screw kit to securely mount the camera to a wall. Ensure the mounting surface is sturdy enough to support the camera's weight.
- **Ceiling Mounting:** The camera can also be mounted upside down on a ceiling for a wider overhead view. Adjust the stand to achieve the desired angle.

## 3.3. Connecting to the Aqara Home App

To set up and manage your camera, download the Aqara Home app from your device's app store. Follow the in-app instructions to add the camera:

1. Open the Aqara Home app and tap the "+" icon in the top right corner.

2. Select "Camera Hub G5 Pro" from the list of devices.
3. Scan the MagicPair QR code located on the base of the camera.
4. Follow the on-screen prompts to connect the camera to your Wi-Fi network (if applicable) and complete the binding process.

### **3.4. HomeKit Integration (Optional for Apple Users)**

For Apple HomeKit users, the G5 Pro supports HomeKit Secure Video. After binding the camera to the Aqara Home app, you can add it to Apple Home:

1. Open the Apple Home app and tap the "+" icon.
2. Select "Add Accessory."
3. Scan the HomeKit QR code on the left side of the camera's base.
4. Follow the prompts to configure the camera within your HomeKit setup, including streaming and recording preferences.

## **4. OPERATION**

The Aqara G5 Pro offers a range of advanced features to enhance your home security and smart home experience.

### **4.1. True Color Night Vision**

Equipped with a 1/1.8" sensor and f/1.0 large aperture, the G5 Pro delivers true color night vision, allowing for clear identification of subjects even in very low light conditions. The built-in 3000K dimmable spotlight further improves visibility and acts as an intruder deterrent.

# Premium True Full Color Night Vision



Figure 4.1: A night view captured by the Aqara G5 Pro, demonstrating its True Color Night Vision capability.

## 4.2. Local AI Visual & Abnormal Sound Detection

The integrated Neural Processing Unit (NPU) enables sophisticated local AI detection, reducing false alarms and providing precise alerts. The camera supports:

- **Visual Detection:** Recognizes faces, individual vehicles, animals, people (including lingering detection), lens obstruction, and package detection.
- **Abnormal Sound Detection:** Identifies babies crying, alarm sounds, barking, and coughing.

These detections can trigger automations and recordings even without an internet connection.

# Locally Hosted 7-in-1 Visual AI + 4-in-1 Audio AI



Figure 4.2: The camera's local AI in action, identifying various objects and events in real-time.

## 4.3. Hub & Matter Bridge Functionality

The G5 Pro acts as a versatile hub, supporting both Aqara Zigbee (up to 80 sub-devices) and Thread (up to 40 sub-devices) dual protocols. It can also bridge third-party Matter devices into the Aqara Home app and expose existing Aqara devices to Matter-compatible platforms like Apple Home, Alexa, and Google Home.

# Superior Wired Connectivity and PoE



Figure 4.3: The G5 Pro's role as a central hub, connecting various smart home devices and platforms.

## 4.4. Multiple Storage Methods & Privacy Protection

The camera offers flexible and secure storage options:

- **HomeKit Secure Video:** Requires an active iCloud subscription and an Apple Home hub.
- **Built-in 8GB eMMC Storage:** Encrypted local storage for recorded events.
- **Aqara Cloud:** Supports cloud storage with full End-to-End encryption.
- **RTSP:** Allows 24/7 recording to local devices (e.g., NAS).

All data is protected with end-to-end encryption, ensuring only you or your family can access it.

# End-to-End Encryption for Privacy Protection



Apple Home  
HomeKit Secure Video



Aqara Cloud



Build-in eMMC



Figure 4.4: Visual representation of the G5 Pro's privacy protection features and integration with smart home ecosystems.

## 5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Aqara G5 Pro Camera Hub.

### 5.1. Cleaning

- Gently wipe the camera lens and body with a soft, dry cloth.
- Avoid using harsh chemicals, cleaning solvents, or abrasive materials, as these can damage the camera's finish or lens.
- Ensure the camera is powered off before cleaning.

### 5.2. Environmental Conditions

The G5 Pro is designed for outdoor use with an IP65 protection rating, making it resistant to dust and water. It operates reliably in a wide range of temperatures, from  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) to  $50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ).

# IP65 for Outdoor Use



Figure 5.1: The camera's durability in various weather conditions, including rain and extreme temperatures.

While robust, avoid direct exposure to extreme conditions beyond its rated specifications to prevent potential damage.

## 6. TROUBLESHOOTING

If you encounter issues with your Aqara G5 Pro Camera Hub, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Camera offline	No power, network issue, Wi-Fi signal weak (if applicable)	Check power connection. Verify network cable (PoE) or Wi-Fi signal strength. Restart camera and router.

Problem	Possible Cause	Solution
Poor video quality	Dirty lens, insufficient lighting, network bandwidth issues	Clean the lens. Ensure adequate lighting for optimal night vision. Check network speed and reduce other network traffic.
Detection not working	Incorrect settings, obstruction, environmental factors	Review detection settings in the Aqara Home app. Ensure clear line of sight for the camera. Adjust sensitivity if needed.
Cannot add to app/HomeKit	Incorrect QR code, network issues, device already bound	Ensure you are scanning the correct QR code. Check network connection. If previously bound, remove from old account first.

If the issue persists after trying these steps, please contact Aqara customer support for further assistance.

## 7. SPECIFICATIONS

Detailed technical specifications for the Aqara 4MP Camera Hub G5 Pro PoE:

Specification	Detail
Model Number	CH-C03E
Resolution	4 MP (Effective Still/Webcam Image Resolution)
Field of View (FOV)	133°
Image Sensor	1/1.8" sensor
Aperture	f/1.0
Night Vision	True Color Night Vision (No infrared light)
Spotlight	Built-in 3000K Dimmable Spotlight
Connectivity	PoE (Power over Ethernet), USB-C (5V2A), Thread, Zigbee
Storage	8GB eMMC (built-in), Aqara Cloud, RTSP, HomeKit Secure Video
AI Detection	Visual (faces, vehicles, animals, people, lingering, lens obstruction, package), Sound (crying, alarm, barking, coughing)
Operating Temperature	-30°C to 50°C (-22°F to 122°F)
IP Rating	IP65 (Water and Dust Resistant)
Dimensions (L x W x H)	3.98 x 2.87 x 3.86 inches

Specification	Detail
Item Weight	1.1 pounds (0.5 Kilograms)
UPC	192784002384

## 8. WARRANTY AND SUPPORT

Aqara products typically come with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included in your product packaging or visit the official Aqara website.

For technical support, troubleshooting assistance, or any product-related inquiries, please contact Aqara customer service through their official support channels. You can often find contact information on the Aqara website or in the user manual.