



Aqara Smart Camera G5 Pro Introduction

continuous connection

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Product Overview

The G5 Pro Camera (PoE Version) is designed for both indoor and outdoor all-weather use. It offers video clarity exceeding 4 megapixels and is equipped with a lens featuring a 133° (diagonal) field of view and an F1.0 large aperture. Combined with a 1/1.8" large-area image sensor, it can maintain color image output even in extremely dark environments.

The G5 Pro camera supports PIR human detection, which can detect the presence of people gathering or lingering within the detection range. It is equipped with a 3000K color temperature visible light fill light, which, when activated in low-light environments, can effectively enhance AI recognition accuracy and serve as supplementary lighting and a warning signal.

It supports various AI functions, including human detection, pet detection, package detection, lens occlusion detection, facial recognition, and vehicle recognition. Additionally, it has a built-in Zigbee gateway function and supports PoE and Type-C external power supply. This product can operate in environments ranging from -30° C to +50° C, making it a versatile outdoor surveillance solution.

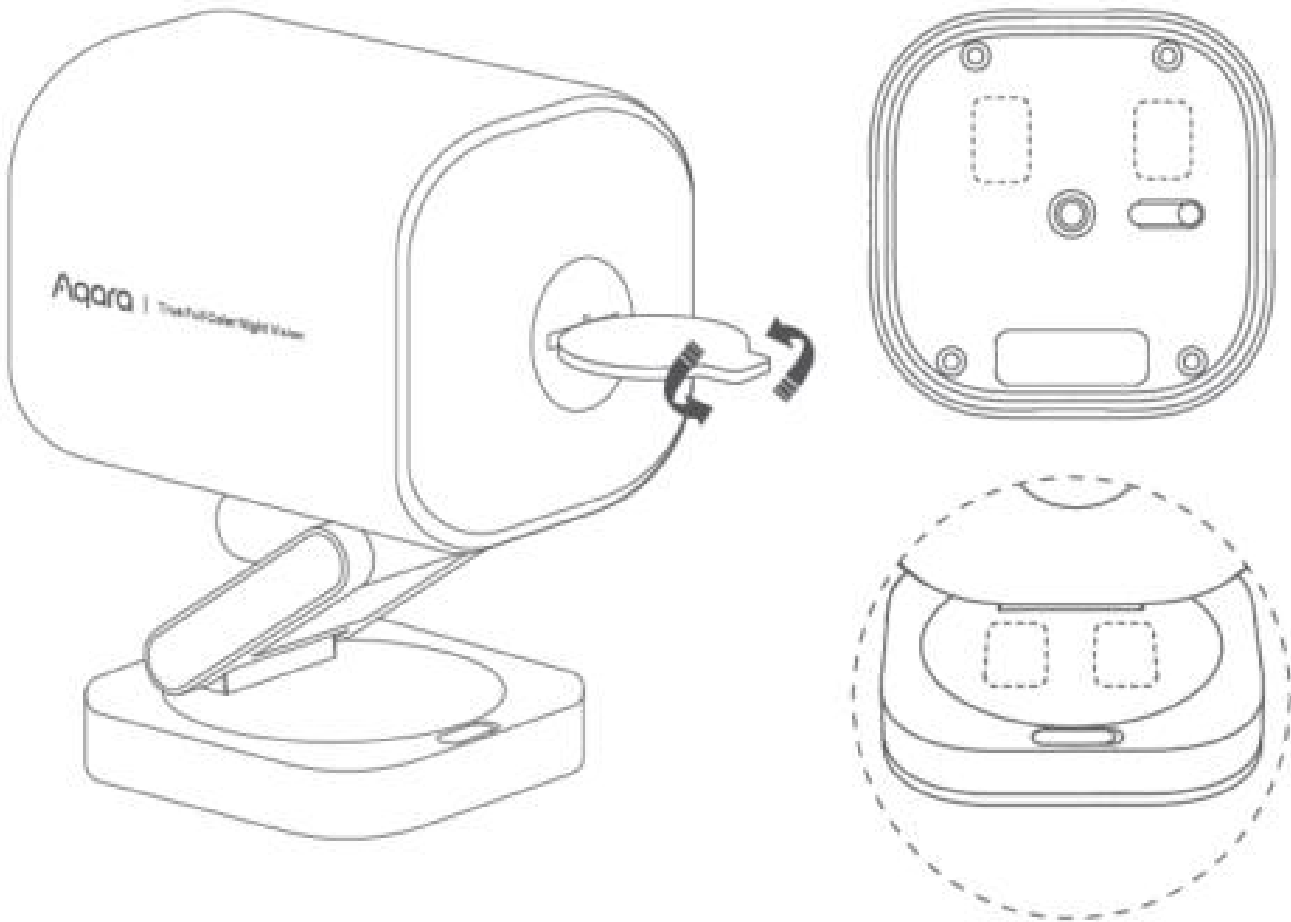
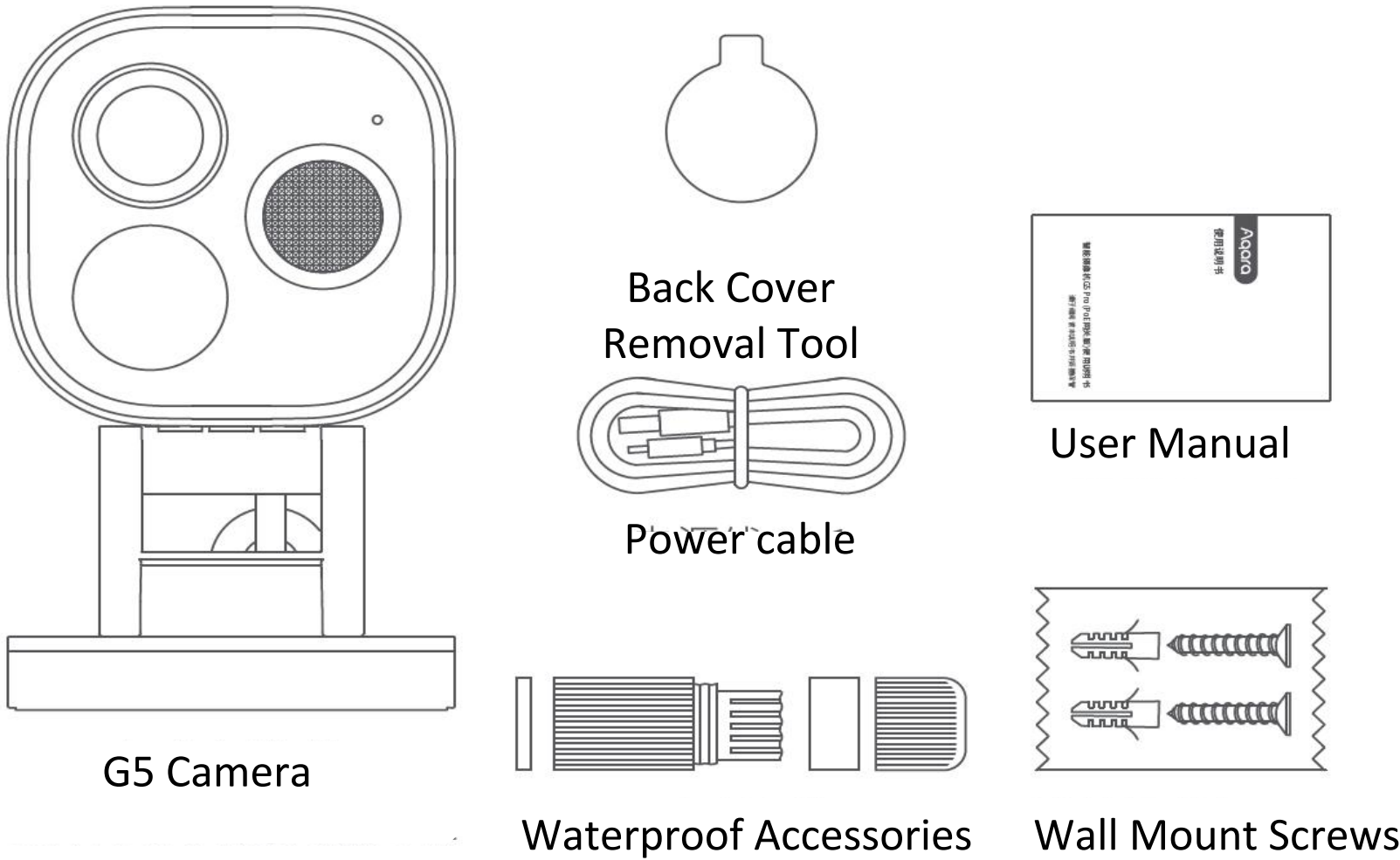
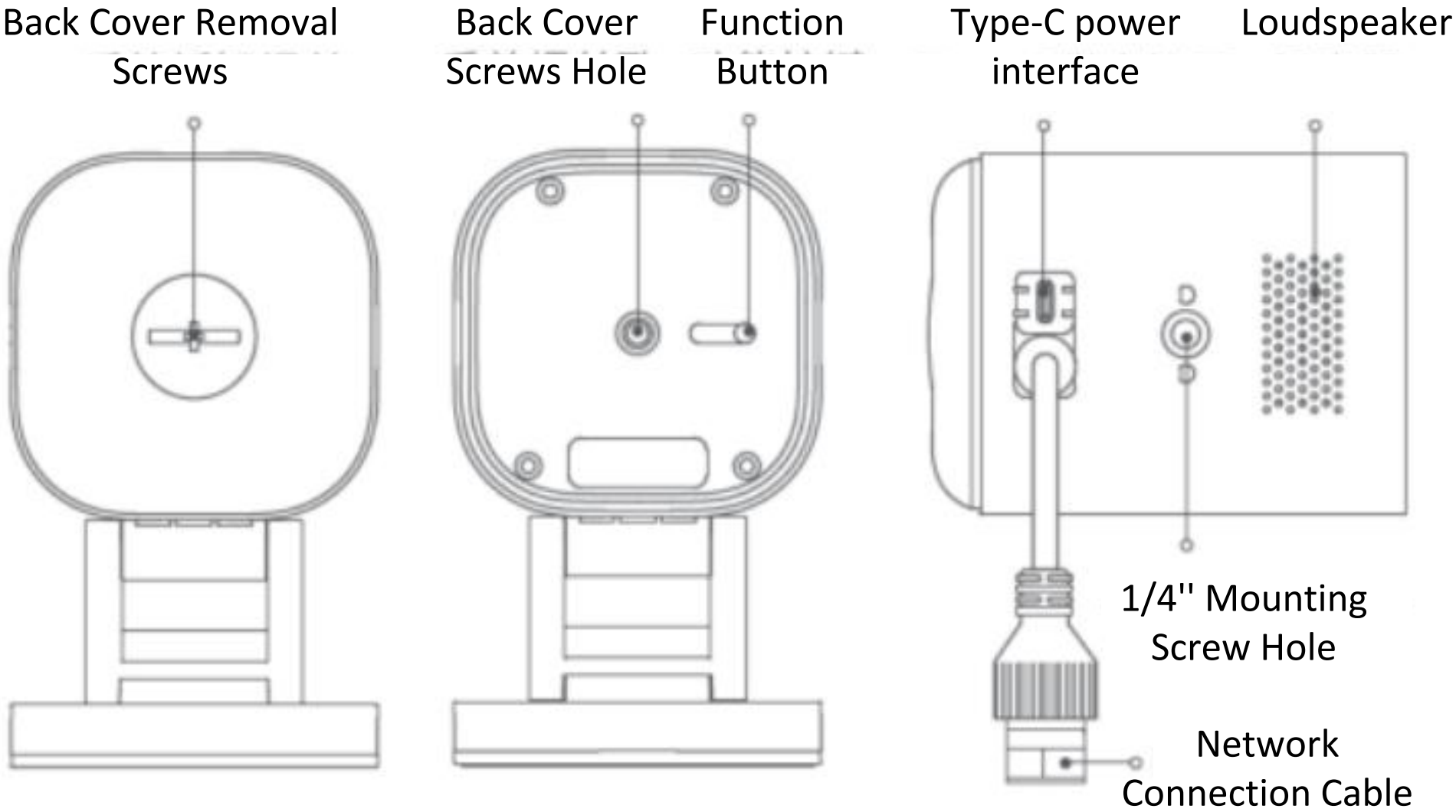
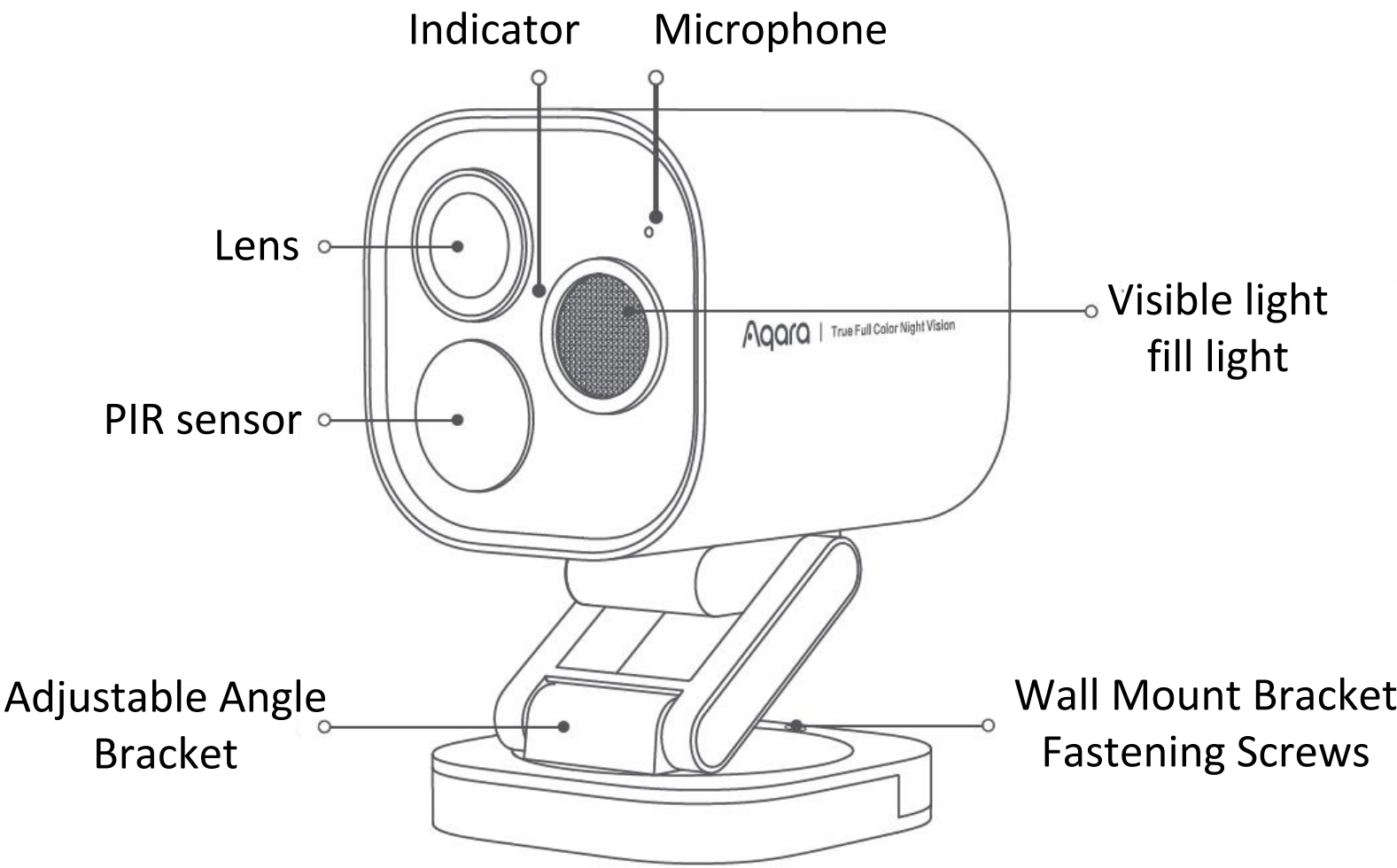
Main Features

- High-Definition Video:** 4-megapixel video with a 133° wide-angle field of view, capturing every detail with clarity.
- Full-Color Night Vision:** Outputs color images even in extremely low light conditions down to 0.01Lux, eliminating the traditional black-and-white night vision images.
- Smart Algorithms:** Capable of recognizing humans, pets, vehicles, and packages in the footage, ensuring no key events are missed.
- Warm Light Fill Light:** Equipped with a 3W, 3000K color temperature fill light, which not only enhances AI recognition accuracy in very dark environments but also provides auxiliary lighting and warning signals.
- NAS Storage:** Local videos can be transferred to a NAS server for extended video storage duration and support for RTSP streaming over the local network.
- Built-in Gateway:** Features a built-in Zigbee 3.0 protocol gateway, marking Aqara's first outdoor gateway product.
- PoE Power Supply:** Supports both Type-C and PoE power supply methods, integrating network and power supply to save installation costs and labor.
- All-Weather Usage:** Operable in environments ranging from -30°C to +50°C, with IP65 dustproof and waterproof rating. The built-in metal bracket and graphene heat dissipation ensure reliable operation in high-temperature environments.
- Multiple Installation Methods:** Comes with a multifunctional bracket supporting flat placement, wall mounting, and ceiling mounting. Users can also replace the bracket with any 1/4" nut-compatible stand.
- HomeKit Support:** The first black light full-color night vision camera to connect with Apple's HomeKit, offering end-to-end data encryption for enhanced security and peace of mind.



Interface and Accessory

The G5 Pro Camera (PoE Version) features a variety of external function interfaces and accessories and comes standard with an omnidirectional adjustable bracket



Installation Method

The G5 Pro Camera (PoE Version) supports three installation methods: flat placement, wall mounting, and ceiling mounting.

The bracket is designed to withstand a weight three times its own and pass a lateral 50N compression test, ensuring that the monitoring position does not deform after wall installation.

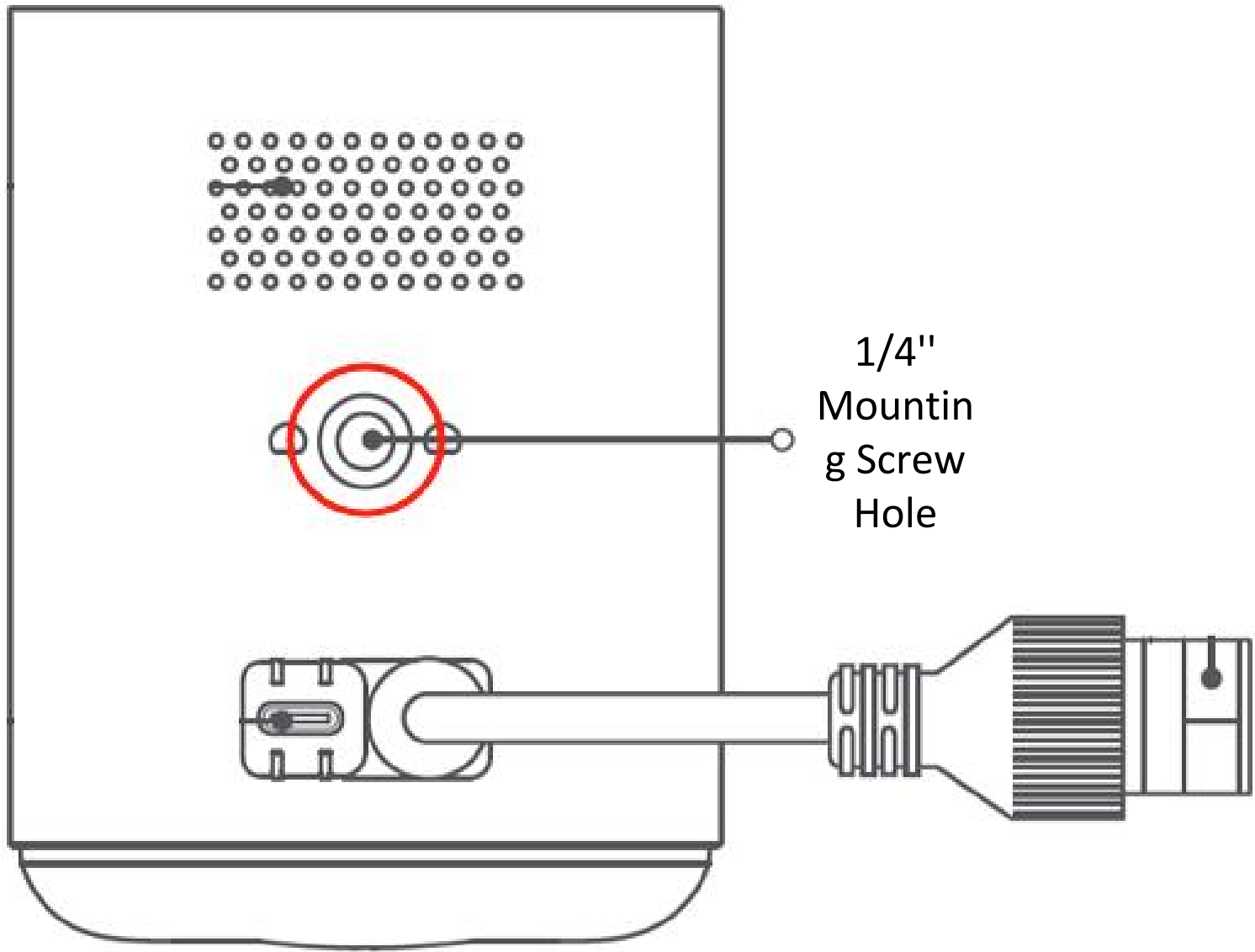
Users can also remove the standard bracket and use a 1/4" nut bracket purchased separately to install the product.



Flat Placement

Wall Mounting

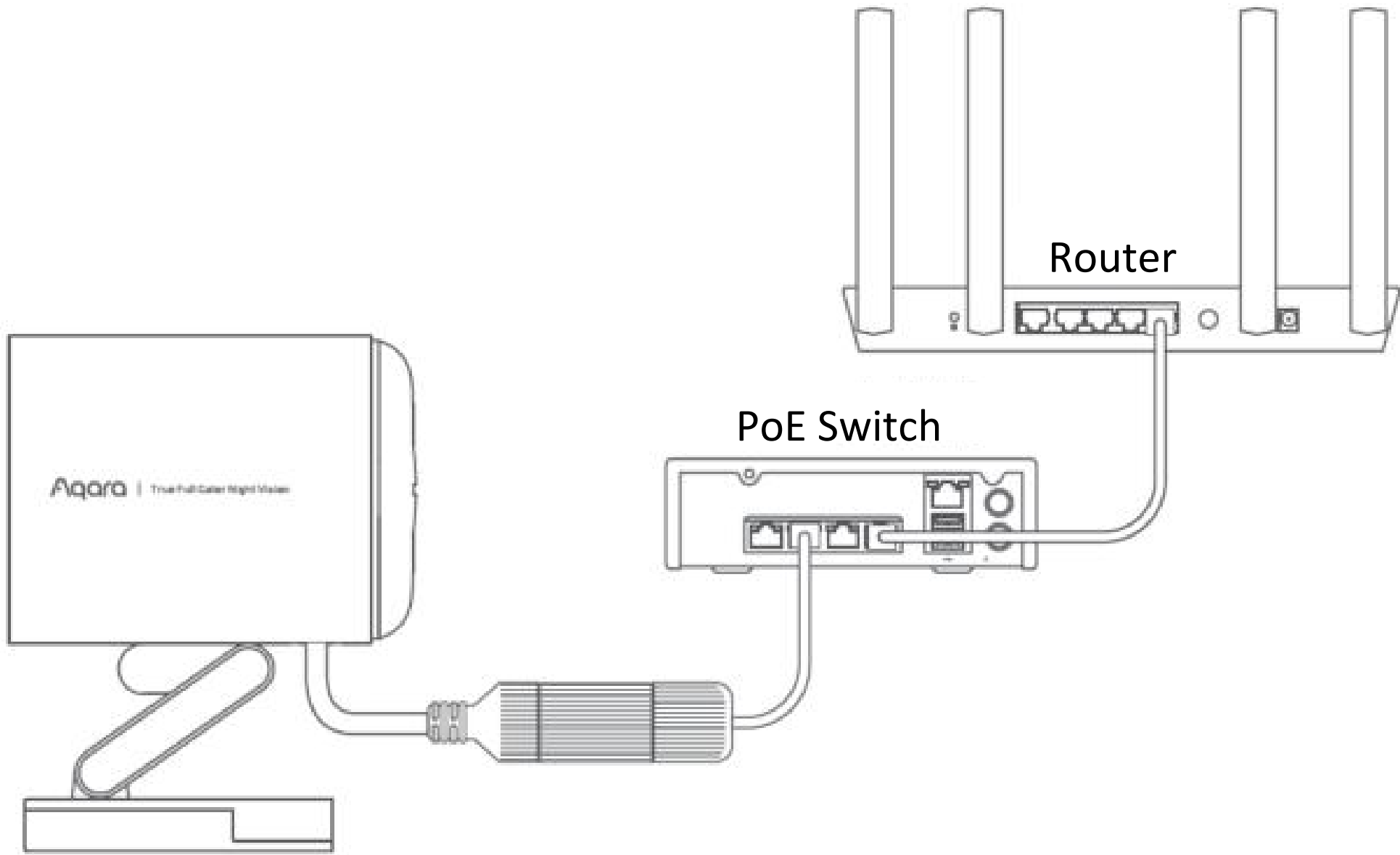
Celling Mounting



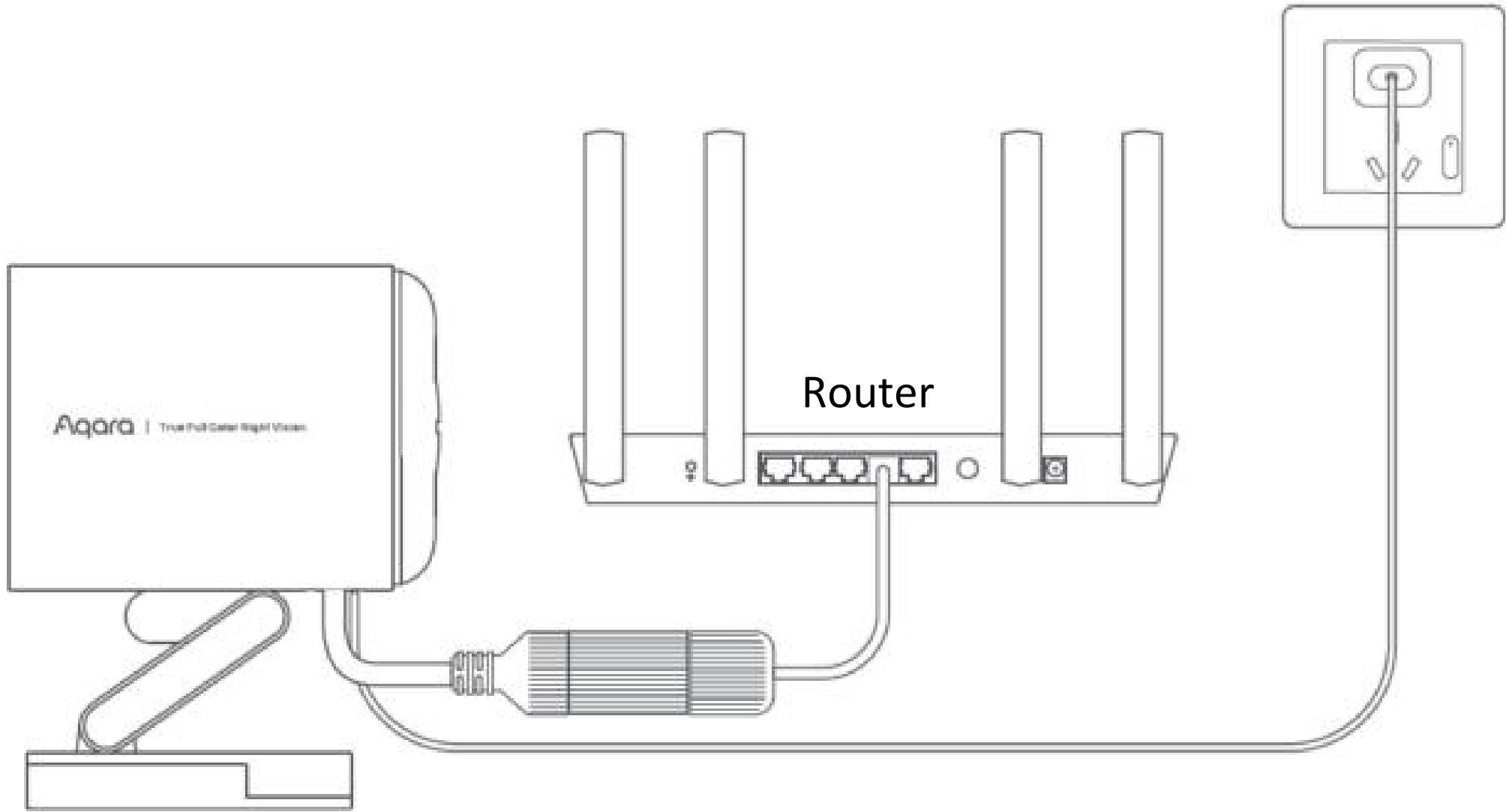
Users can configure the bracket according to their needs

Power Supply and Networking

This product can be powered either through an external power adapter via the Type-C interface or through PoE (Power over Ethernet) using the RJ45 network port. Please choose the power supply method based on the actual installation location



Power supply and networking by PoE



Powered by Type-C and networking by Ethernet Cable

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Image Sensor

The G5 Pro Camera (PoE Version) uses a large-area image sensor with over 4 Megapixel (2688×1520) and a diagonal length of 1/1.8". A larger sensor size means more light is captured, resulting in larger individual pixels and greater sensitivity to light. This is one of the reasons why the G5 Pro can output high-brightness color images even in extremely dark environments. In contrast, ordinary cameras typically use smaller image sensors, such as 1/2.8" or 1/3", which cannot compare to the G5 Pro.

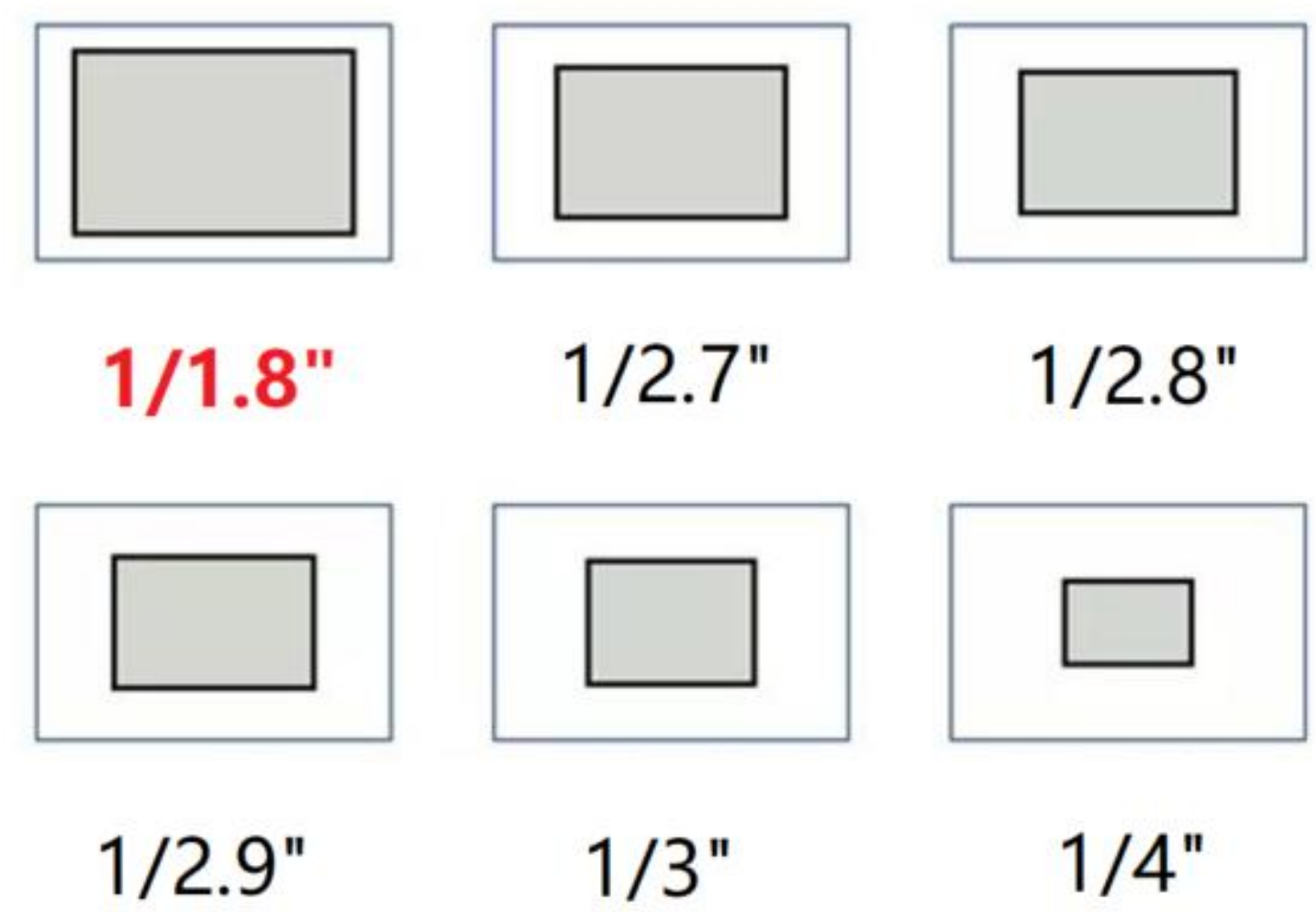


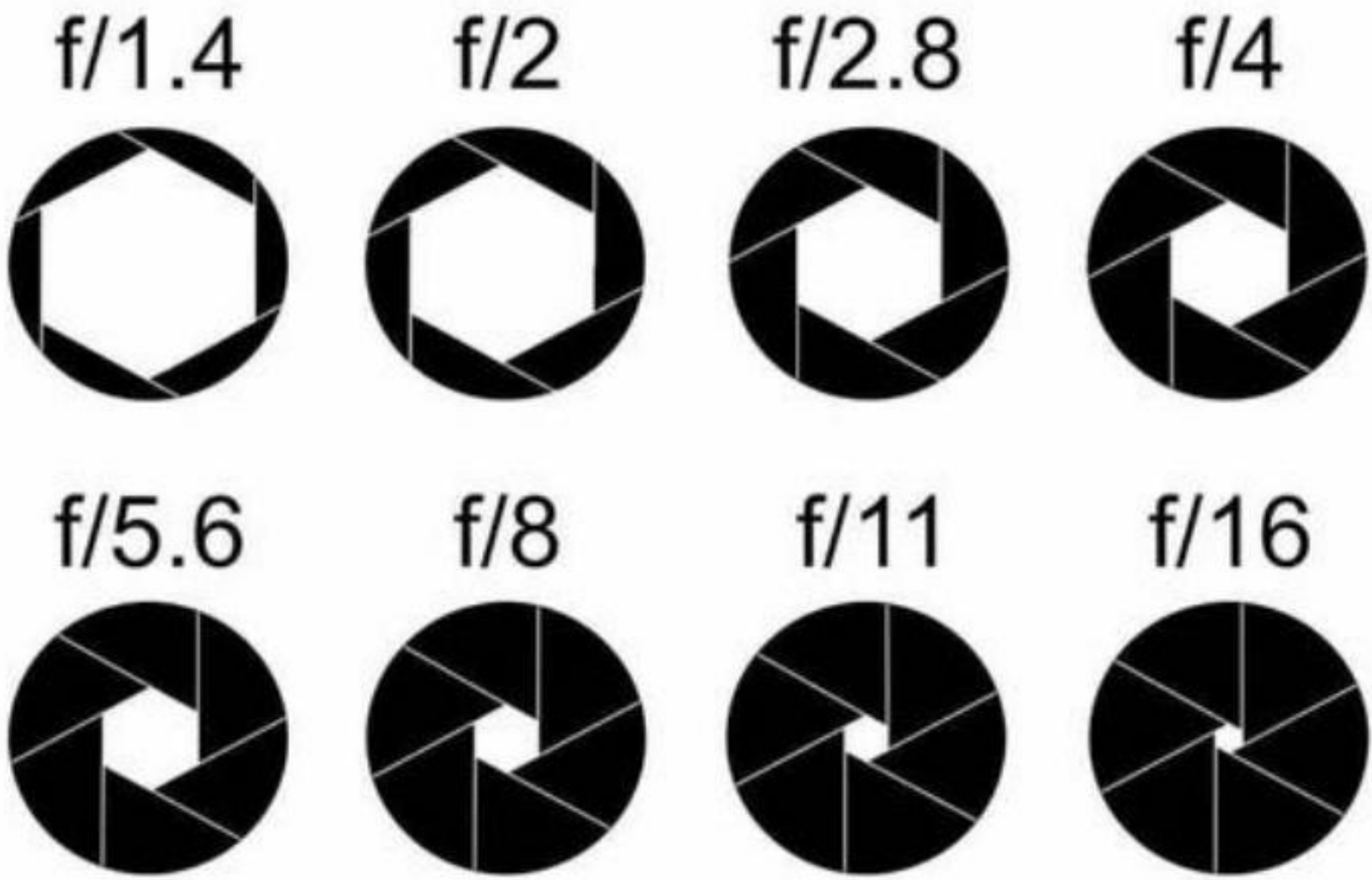
Image Sensor Size Diagram

Optical Lens

The G5 Pro Camera (PoE Version) also utilizes a large-aperture, high-definition wide-angle lens that is matched to the image sensor. It can clearly see targets at around 10 meters. The large aperture ensures that more light passes through the lens to reach the surface of the image sensor, resulting in higher image brightness. Additionally, the G5 Pro's lens is the widest-angle model among F1.0 aperture lenses, allowing it not only to see clearly but also to capture a wider field of view.



F1.0 Large Aperture + 133° Wide-Angle Lens



Lens Aperture Size Diagram

PIR Sensor

Compared to the G4 Doorbell, the G5 Pro Camera's Fresnel lens has an effective surface area nearly 9 times larger than that of the G4 Doorbell, providing a larger infrared reception area. This also allows the G5 Pro to have a longer detection distance and a wider detection range (horizontal 100° , vertical 65° , detection distance of 10 meters)

The recommended installation method is at a height of 3 meters, with the lens tilted downwards at a 30° angle

Spotlight

The G5 Pro Camera (PoE Version) is equipped with a 3-watt visible light spotlight with a constant color temperature of 3000K and a 120° illumination angle. The brightness can be adjusted automatically (supports knob-controlled brightness adjustment). In addition to providing supplementary lighting, the spotlight can serve as a warning light when danger is detected. In low-light environments, the additional lighting can effectively enhance AI recognition accuracy.



eMMC Storage

The G5 Pro Camera (PoE Version) uses a built-in eMMC storage chip for local storage. The built-in eMMC reduces the need for external openings, improving the device's waterproof performance. Additionally, it eliminates potential compatibility issues that might arise from users purchasing their own Micro SD cards. the overseas online version has 8GB, **and the overseas offline version has 32GB.**



AI SoC

The G5 Pro supports detecting the presence of people, animals, packages, vehicles, as well as abnormal sounds and lens obstructions in the video footage.



High-Sensitivity Microphone

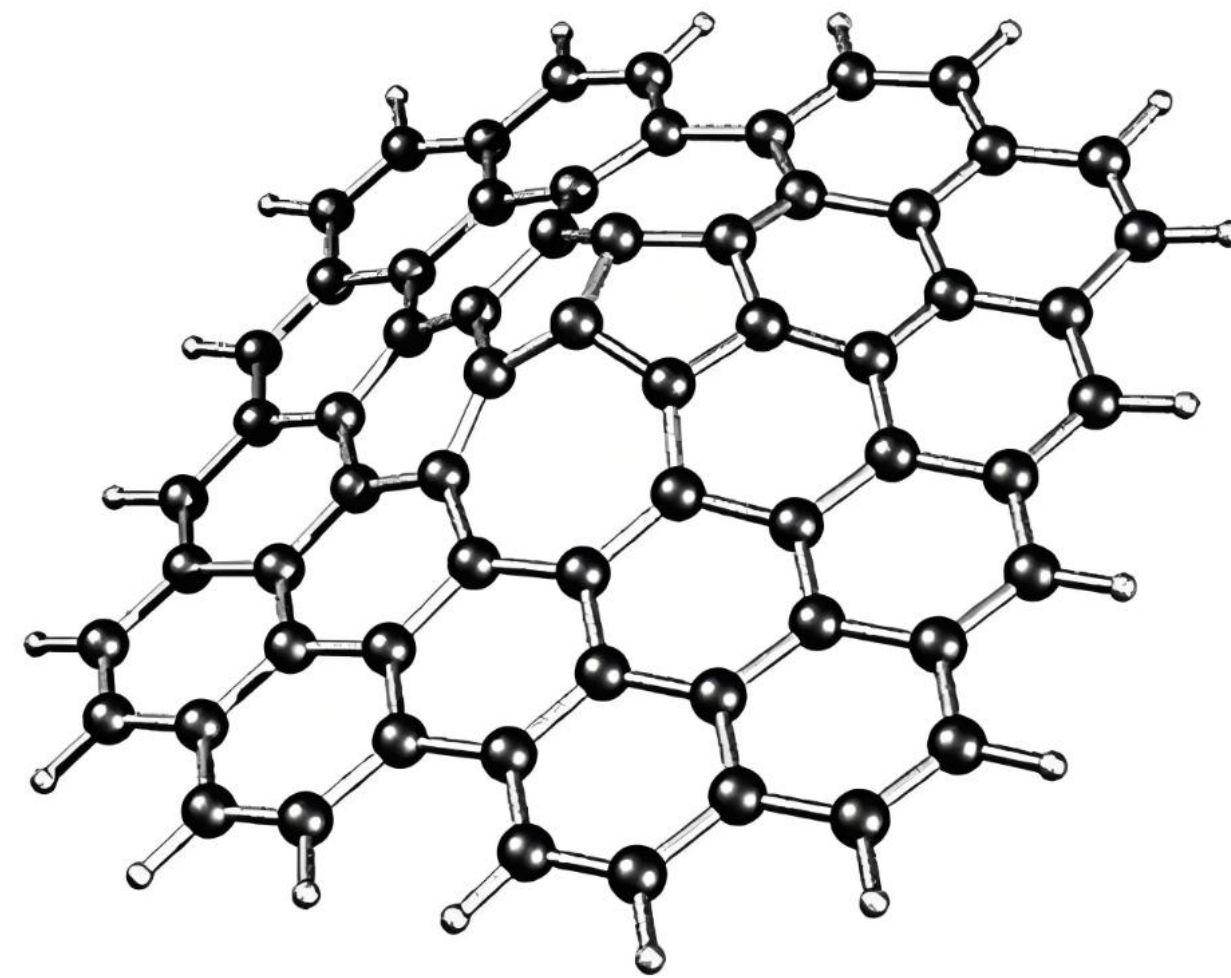
Compared to other Aqara cameras, the G5 Pro Smart Camera (PoE Version) uses an electret microphone with a sensitivity of up to -33dB. This provides a further and clearer sound pickup capability.



Thermal Design

The G5 Pro Camera features an internal design with a metal bracket combined with graphene heat dissipation. The entire hardware system has undergone rigorous environmental testing and can operate stably in temperatures ranging from -30°C to $+50^{\circ}\text{C}$.

Graphene: A carbon allotrope, is one of the most popular emerging materials today. It has excellent thermal conductivity properties and is widely used in the heat dissipation systems of consumer electronics, such as smartphones.



IP65 Rating

Although the G5 Pro Camera (PoE Version) features a complex structure, it still incorporates precise waterproof and dustproof designs within a limited space. The overall protection level meets IP65 standards, making it suitable for all-weather outdoor use



Product Specification

eMMC	8/32GB
PIR	Horizontal 100° , Vertical 65° , Sensitivity can be adjusted in real-time
FOV	133.5° (diagonal), Horizontal 112° , Vertical 60.3°
Focal Length	4.2 mm
Aperture	F1.0
Photosensitive	Sensor detects soft light sensitivity
Infrared light	Not support
Spotlight	One unit, 3W power, 3000K color temperature, 120° beam angle
Loudspeaker	4Ω2W
Zigbee	2.4GHz、 IEEE 802.15.4、 Zigbee 3.0
Zigbee Frequency	2405-2475 MHz
Wired Connection	One RJ45
Battery	No battery
Type-C Power Supply	DC 5V≡ 2A
PoE	IEEE 802.3af, 48V≡ 0.27A
Button	One set button
Indicator	One RGB tri-color light, PWM color adjustment.

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True Full-Color Night Vision

The G5 Pro Camera (PoE Version) is Aqara's first true full-color night vision camera. Unlike traditional infrared black-and-white night vision, the G5 Pro can maintain color image output at night. Even at an illumination level of 0.01Lux, it can distinguish human shapes without activating the fill light. Compared to traditional infrared-supplemented black-and-white night vision cameras, it can restore the original color information of the scene in low-light environments, enabling the identification of features such as skin tone and clothing color, thereby providing video with higher analytical value.



Human Eye Effect



Infrared Night Vision



Full-Color Night Vision

The G5 Pro Camera (PoE Version) does not support generating black-and-white night vision images using infrared fill light.

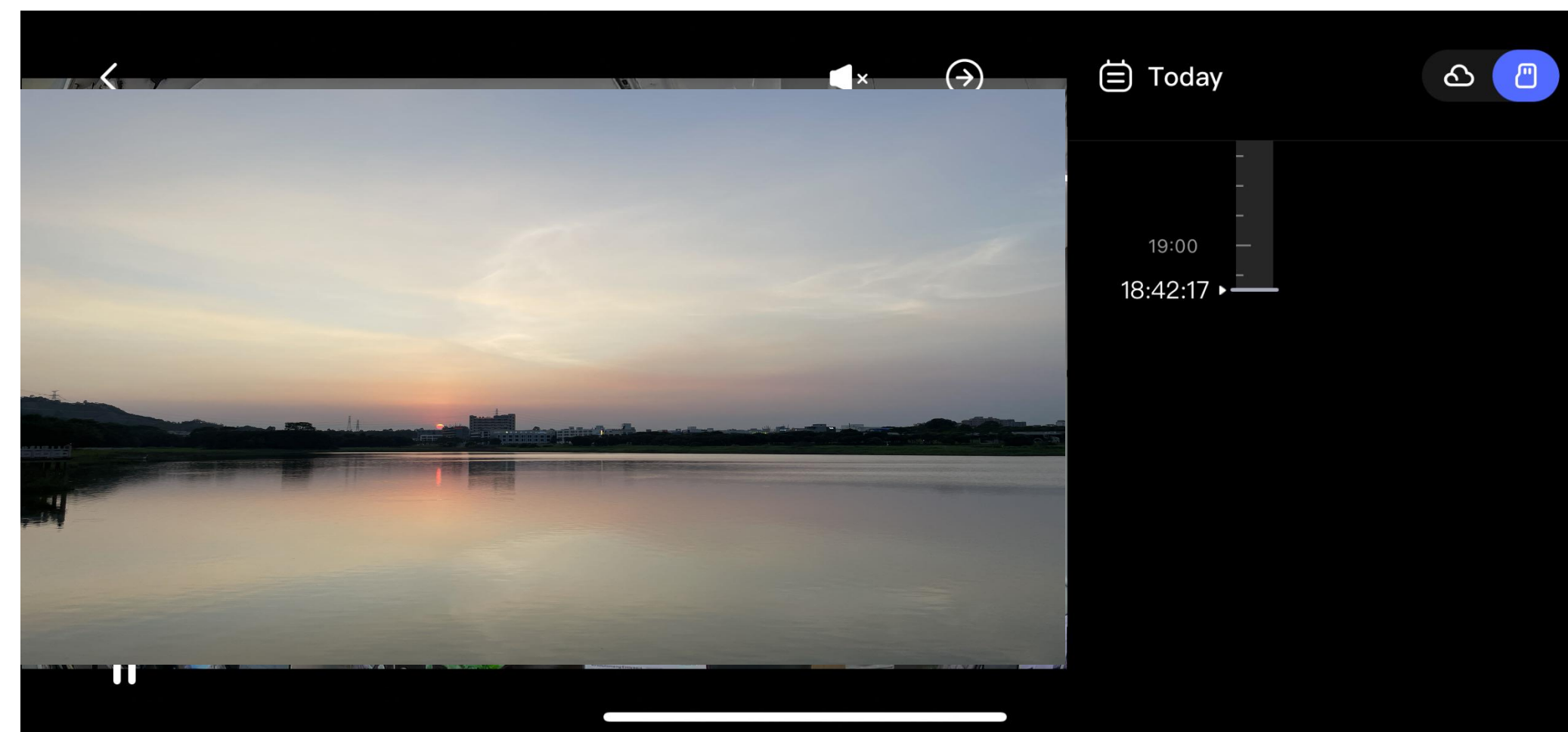
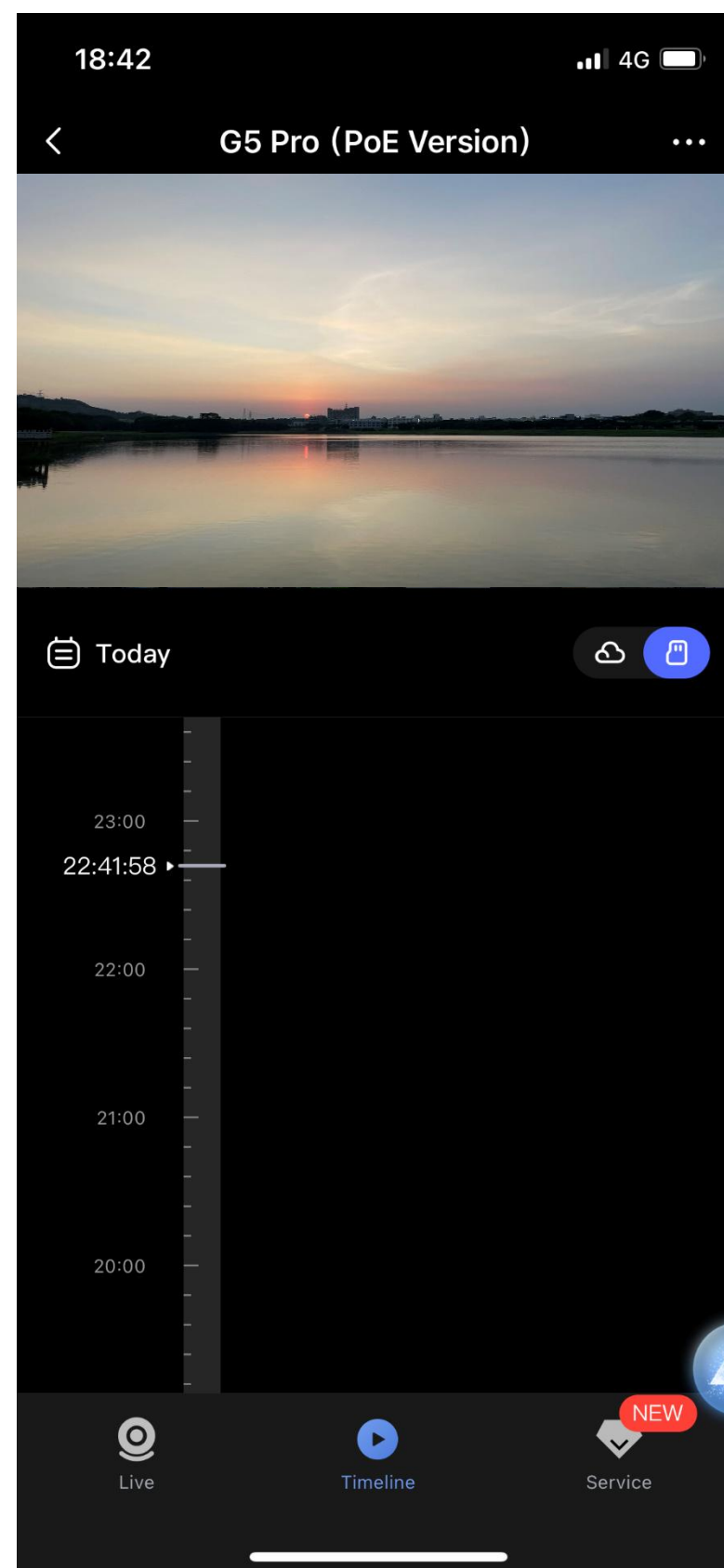
True 4 Megapixel HD

The G5 Pro Camera (PoE Version) is Aqara's first self-developed 4-megapixel HD camera. The higher pixel count not only delivers clearer image details but also allows for capturing a wider-angle view. The G5 Pro surpasses cameras that advertise 2.5K (2560×1440) resolution with even more pixels, reaching 2.6K (2688×1520), with a total pixel count exceeding 4 million.



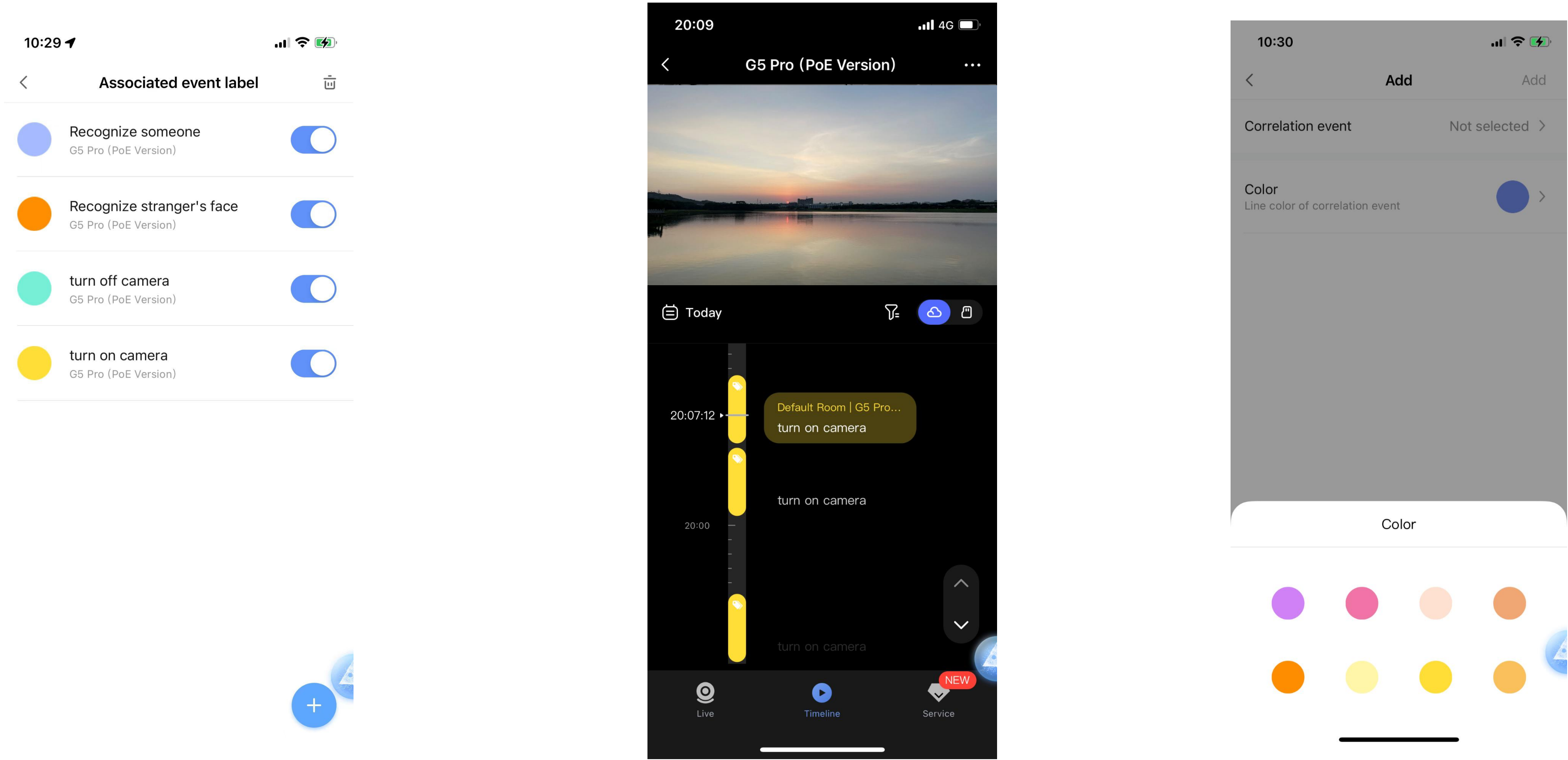
New UI Design for Video Playback

The G5 Pro has introduced a completely new adjustment to the video playback timeline in the app, changing the UI layout from horizontal to vertical. A new timeline feature for cloud event recordings has been added, and the playback logic has been optimized. Icons or text displays for event types have been added. When events are detected, the video will play at normal speed. During intervals with no events, the camera automatically captures one frame every 10 minutes to create a low-priority video. During playback, the app will automatically fast-forward through these intervals, improving search efficiency.



New Event Label Function

The G5 Pro has revamped the associated event tagging feature, not only adding guided instructions to make it easier for users to get started but also enhancing the function to record cloud videos when linked devices trigger events. All Aqara smart devices can now be linked to the camera for recording or sending notifications, greatly enriching the types of camera events. The new feature also includes an updated event filtering system, allowing for comprehensive searches based on the room where the linked device is located, device type, color-coded tags, and the time period when the event occurred, significantly improving viewing efficiency.

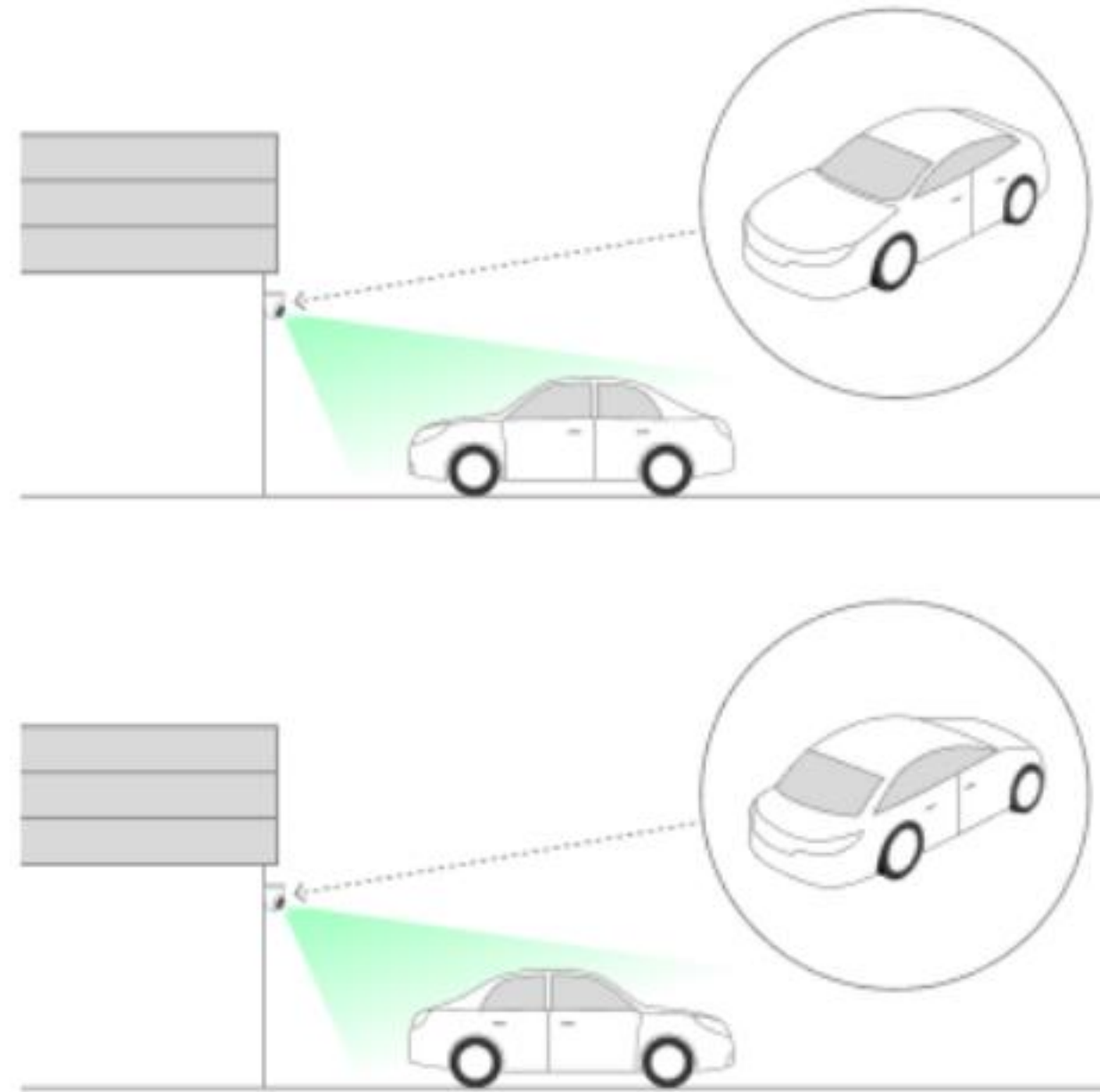


The Capabilities of Visual AI

The Smart Camera G5 Pro (PoE Version), in addition to traditional face, human shape, and pet recognition, has for the first time added capabilities for package guarding, vehicle recognition, and lens occlusion detection. Package guarding can monitor the entire process of a package appearing and disappearing. Vehicle recognition can identify whether a vehicle is approaching or moving away, which can be used to automate the opening and closing of garage doors based on this condition.



Package guarding



Vehicle recognition



LENS occlusion detection

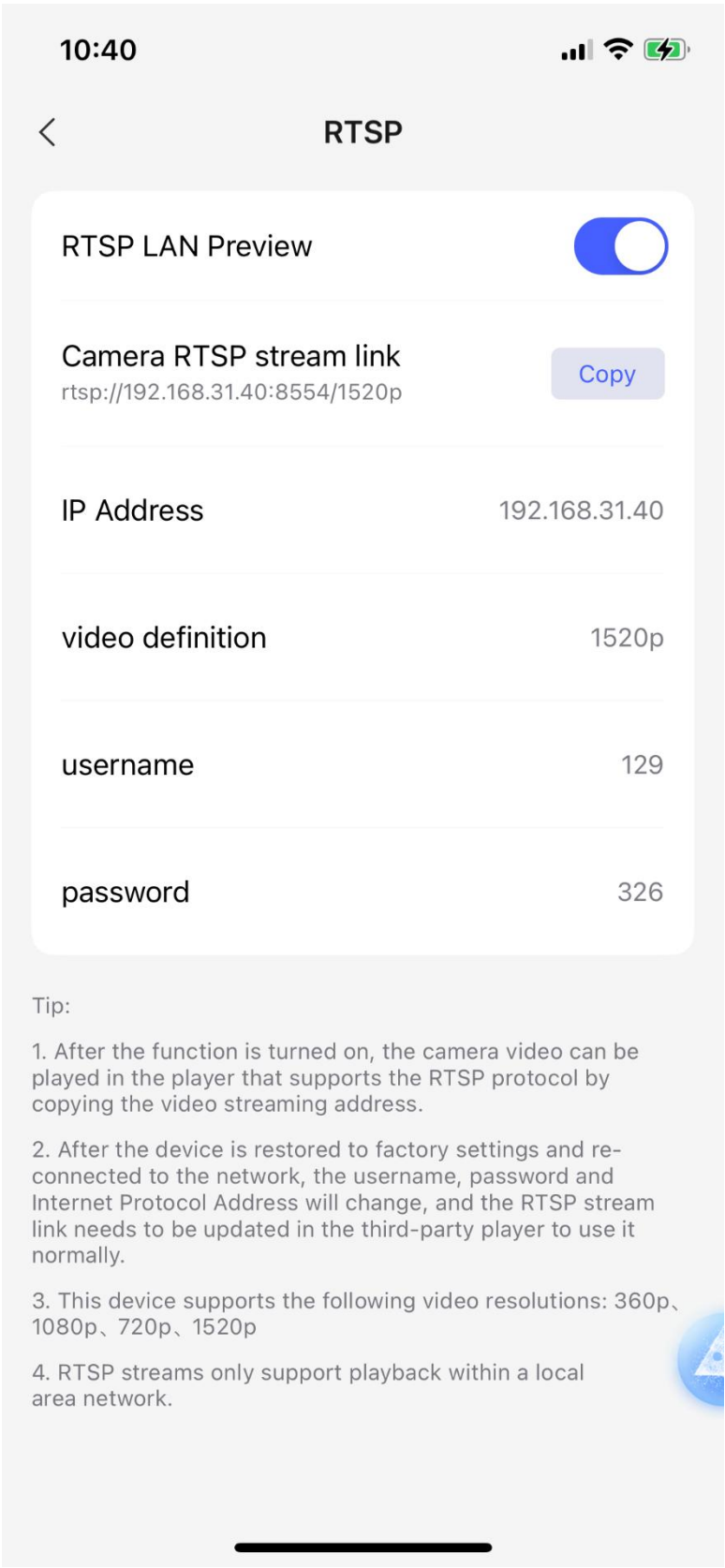
The Capabilities of Audio AI

The smart camera G5 Pro (PoE Version) also has an upgraded version of abnormal sound detection capabilities, which can identify baby crying, alarm sounds, dog barking, coughing and other sounds.



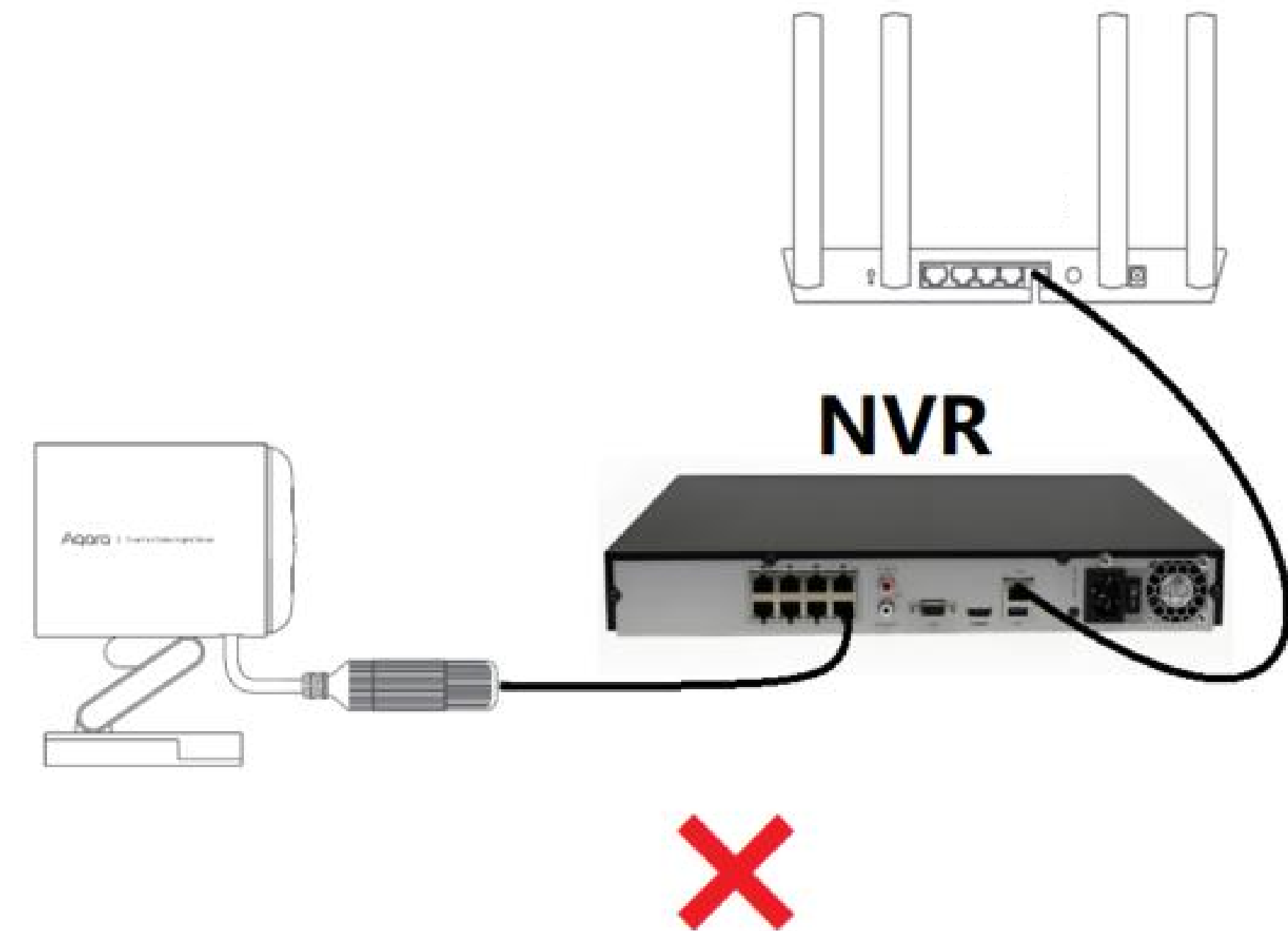
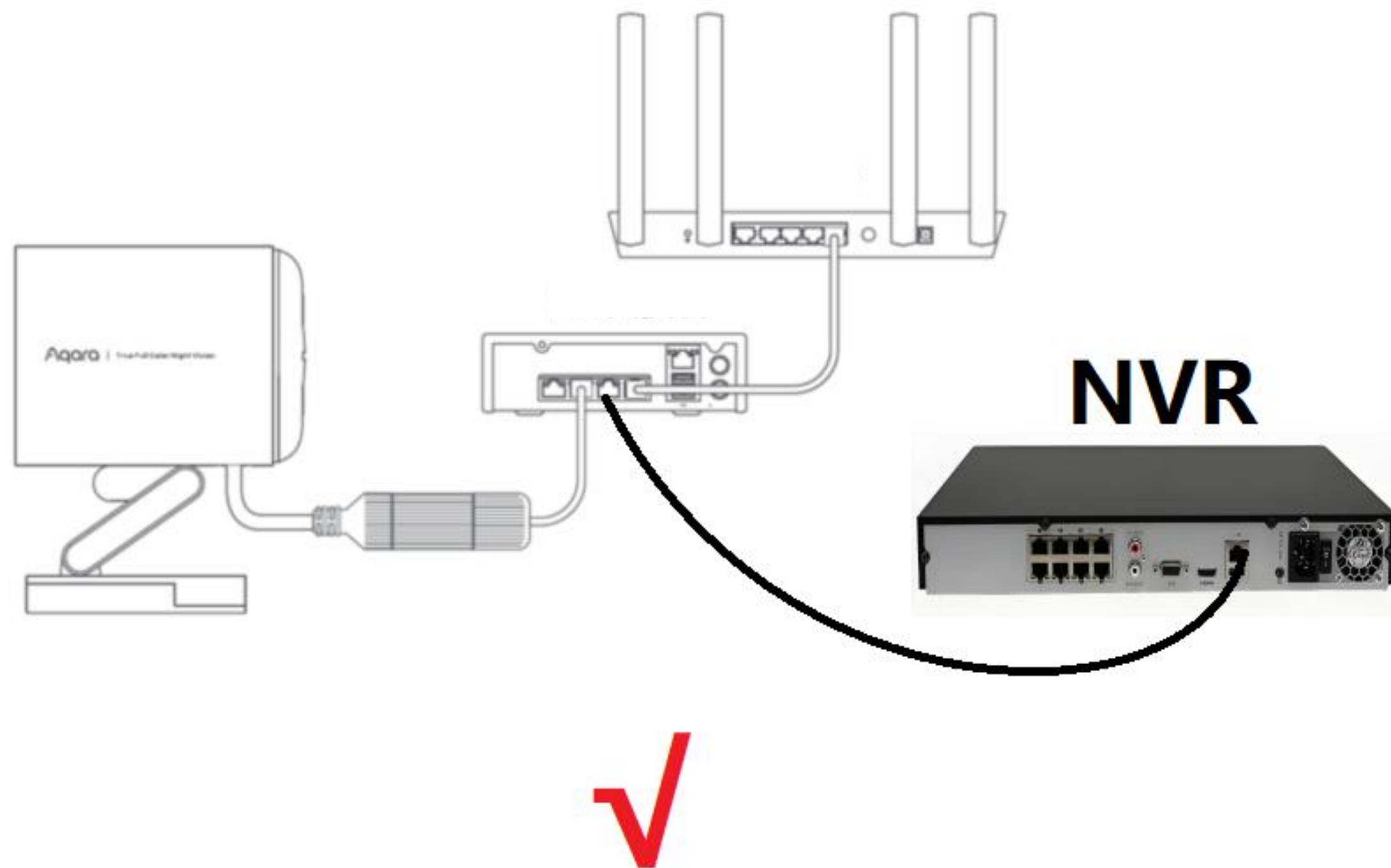
RSTP Function

RTSP (Real Time Streaming Protocol) is a widely used audio and video streaming protocol in surveillance cameras and is also the standard streaming protocol within the ONVIF protocol suite. With support for RTSP, the G5 Pro camera can connect to Network Video Recorders (NVRs), VLC media player, Home Assistant, and other third-party applications. This enhances the DIY attributes of the camera, allowing for greater flexibility and integration with various systems.



Connect the NVR

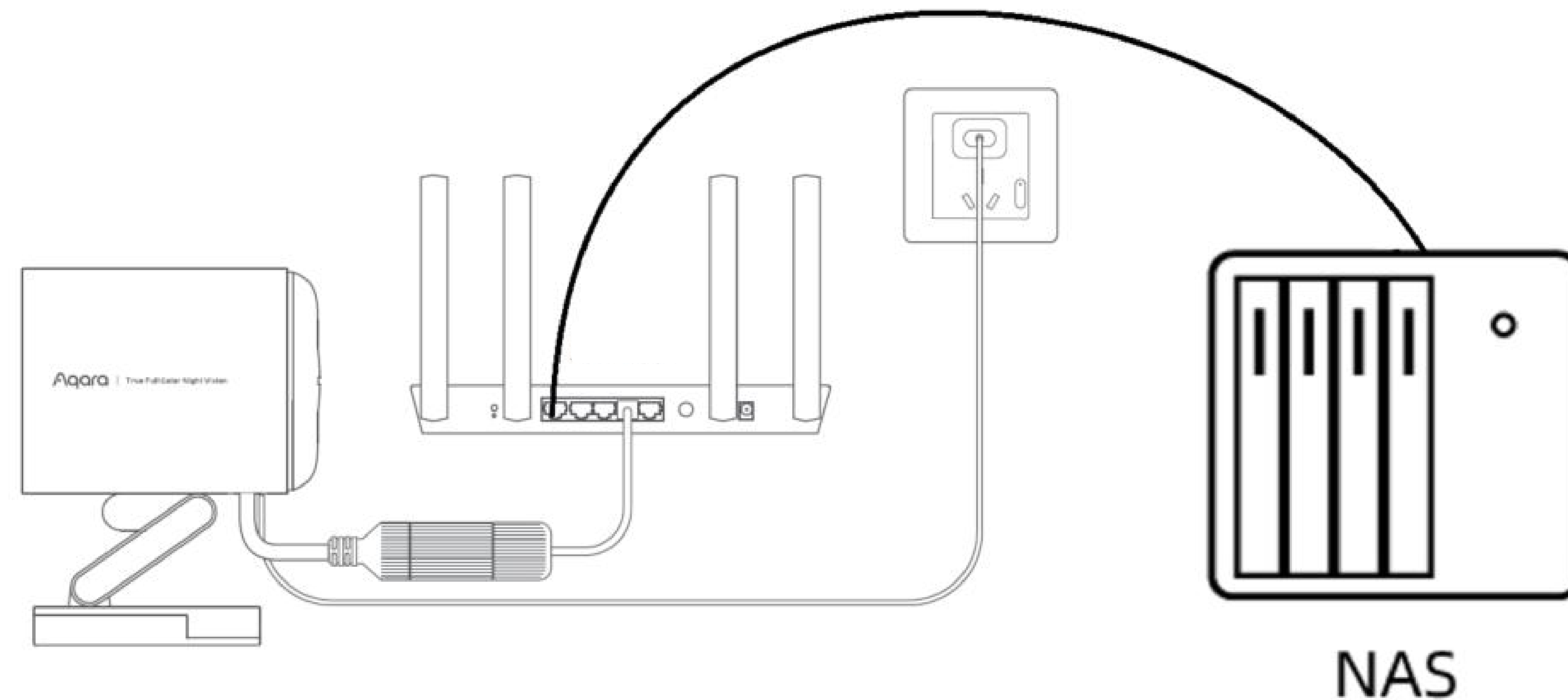
When using the G5 Pro camera via RTSP to connect to NVRs or other digital video recorder devices, please refer to the schematic on the lower left to ensure proper network connection. This setup guarantees that the camera can connect normally to both the app and the NVR. If you connect the G5 Pro and the NVR as shown in the schematic on the lower right, the devices will not be able to connect to the network properly.



Due to the lack of support for the ONVIF protocol, the camera cannot be automatically searched and added by NVRs; manual configuration of relevant parameters is required. Currently, only Hikvision NVRs have been tested and confirmed to bind properly. Other brands of NVRs may have compatibility issues.

NAS Storage

The Smart Camera G5 Pro (PoE Gateway Edition) supports connecting to NAS storage devices to offload local data. When the eMMC capacity is insufficient for video recording duration, you can choose to connect to a NAS storage device to expand local storage space, customizing your own dedicated storage solution. The compatibility of NAS offloading has been enhanced through several generations of Aqara camera upgrades, and it is now compatible with most NAS storage devices available on the market.



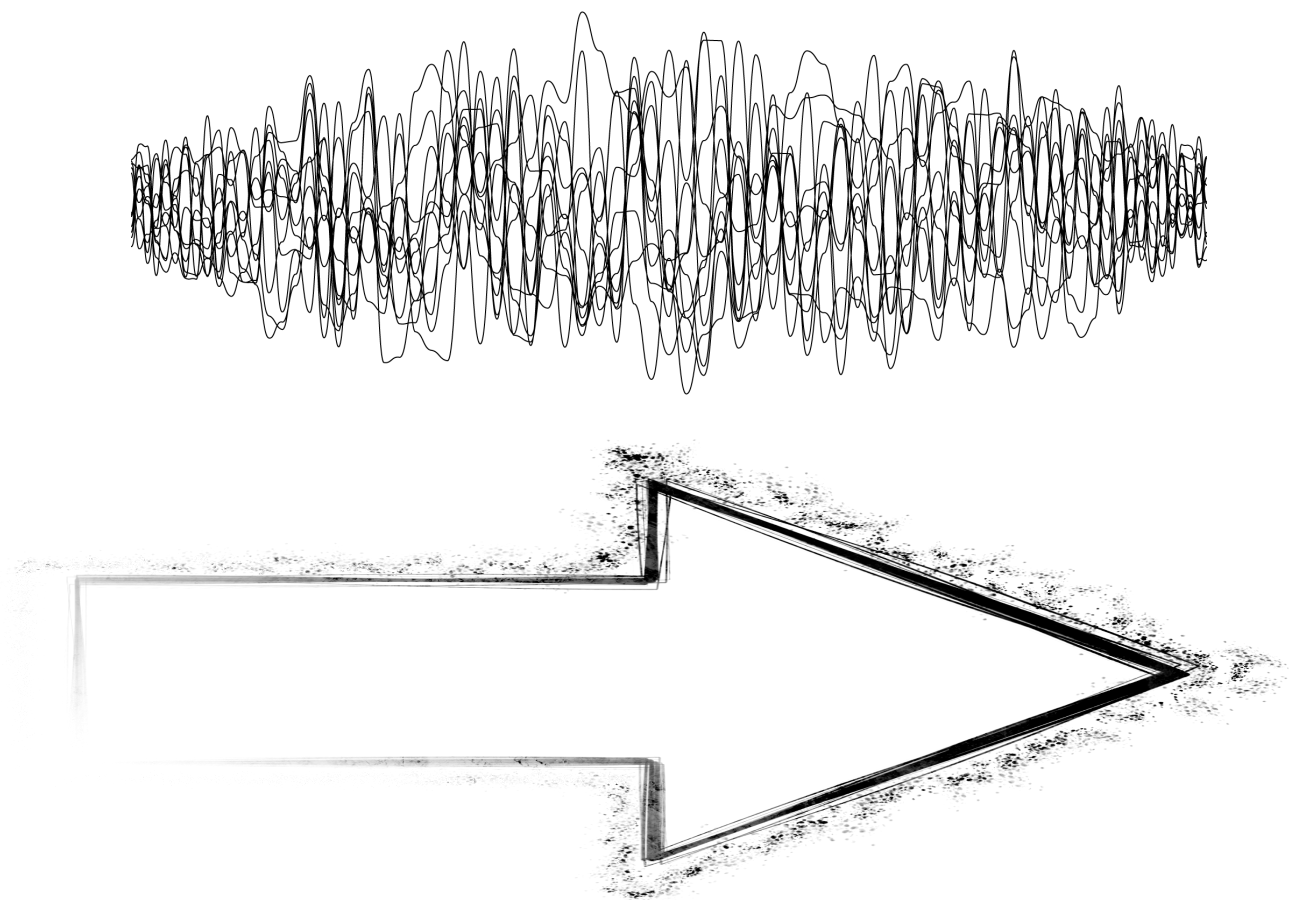
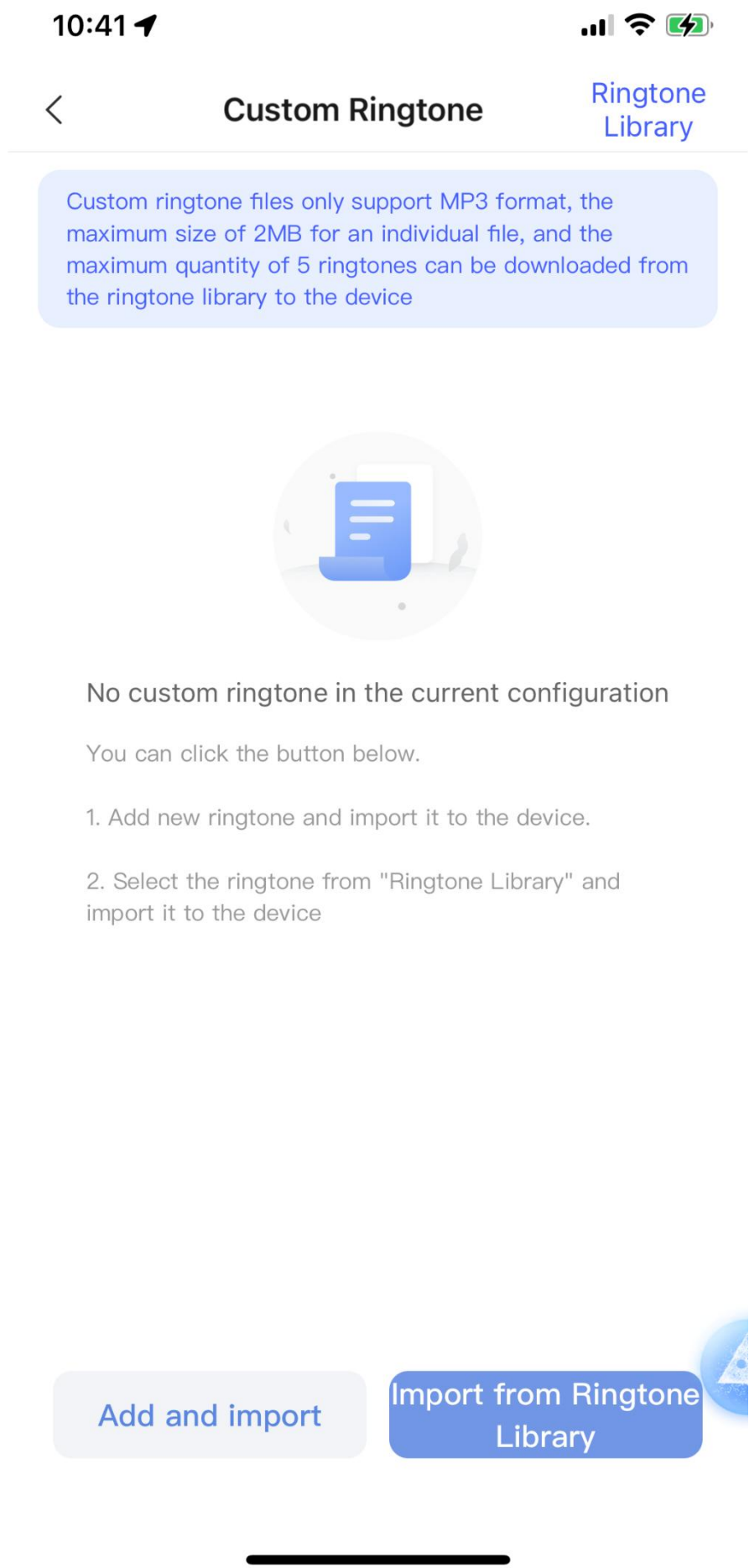
Zigbee Hub

The Smart Camera G5 Pro (PoE Gateway Edition) retains the Zigbee gateway functionality, making it Aqara's first gateway product suitable for outdoor use. Additionally, the G5 Pro also supports functioning as a Matter Bridge, integrating with third-party ecosystems.



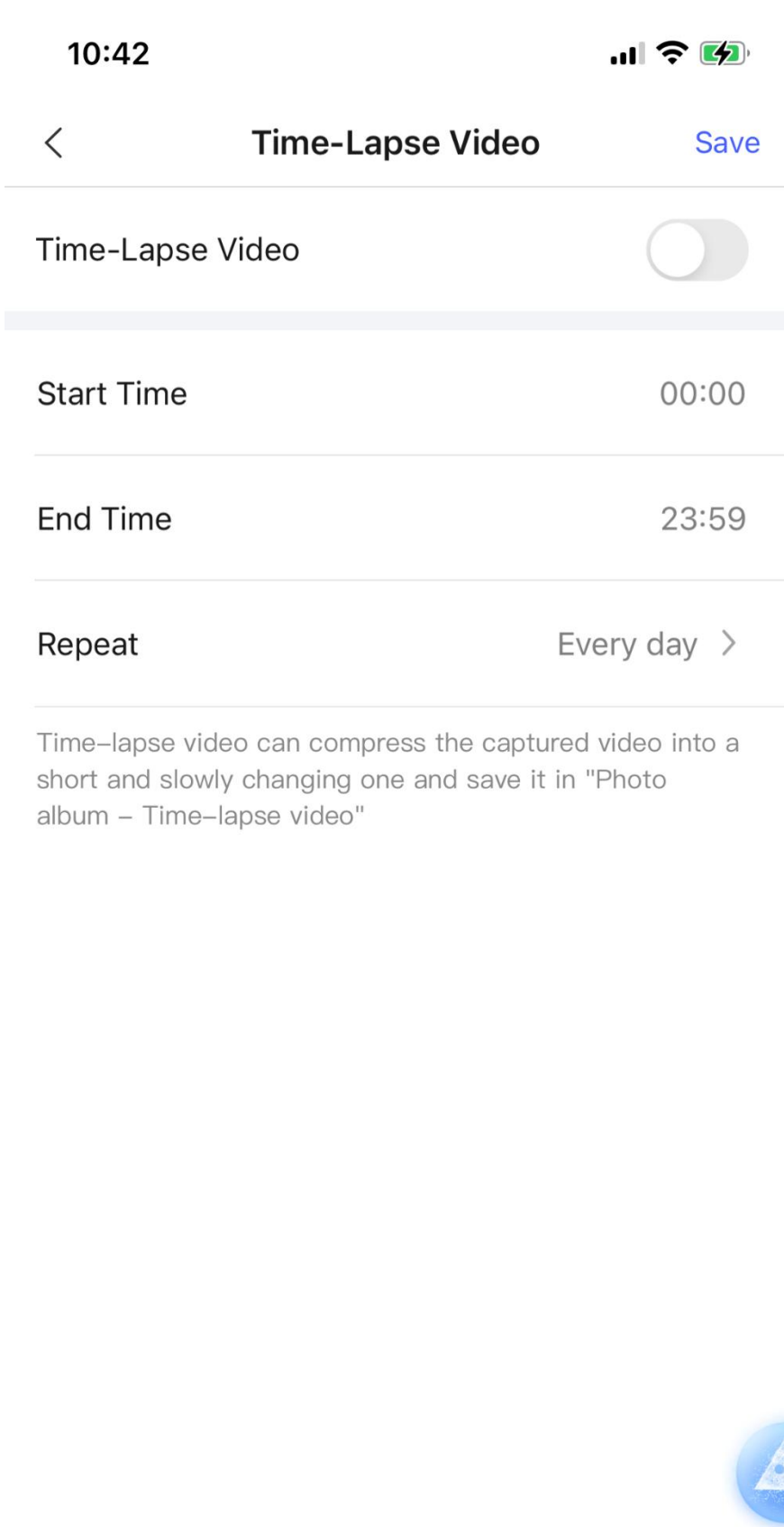
Customized Ringtone

The Smart Camera G5 Pro (PoE Version) inherits the gateway's custom ringtone feature. Users can upload MP3 format ringtones via the app and send them to the camera. It can play specified audio through automation linkage, facilitating automated surveillance and security setups in certain scenarios.



Time-Lapse

The Smart Camera G5 Pro (PoE Gateway Edition) continues to support the time-lapse photography feature. Users can set specific time periods to compress captured video into a 15-second short video, which is then saved in the album under 'Time-Lapse Photography.' This feature allows the surveillance camera to offer an interesting, professional touch.



Privacy Protection

The Smart Camera G5 Pro (PoE Version) can set privacy protection for up to three specified areas within the camera's view. Once set, these areas will be obscured in both live and recorded footage, helping to protect the privacy of neighbors.



Masking zone (0/3)

- Operation instructions:
- Hold the grid and drag to select area, and the selected area is the privacy occlusion area.
 - Click the selected area to cancel the selection, please return to the live page to view.
 - After setting the occlusion area, it cannot be seen from the video screen and will not trigger events (motion detection is not affected).



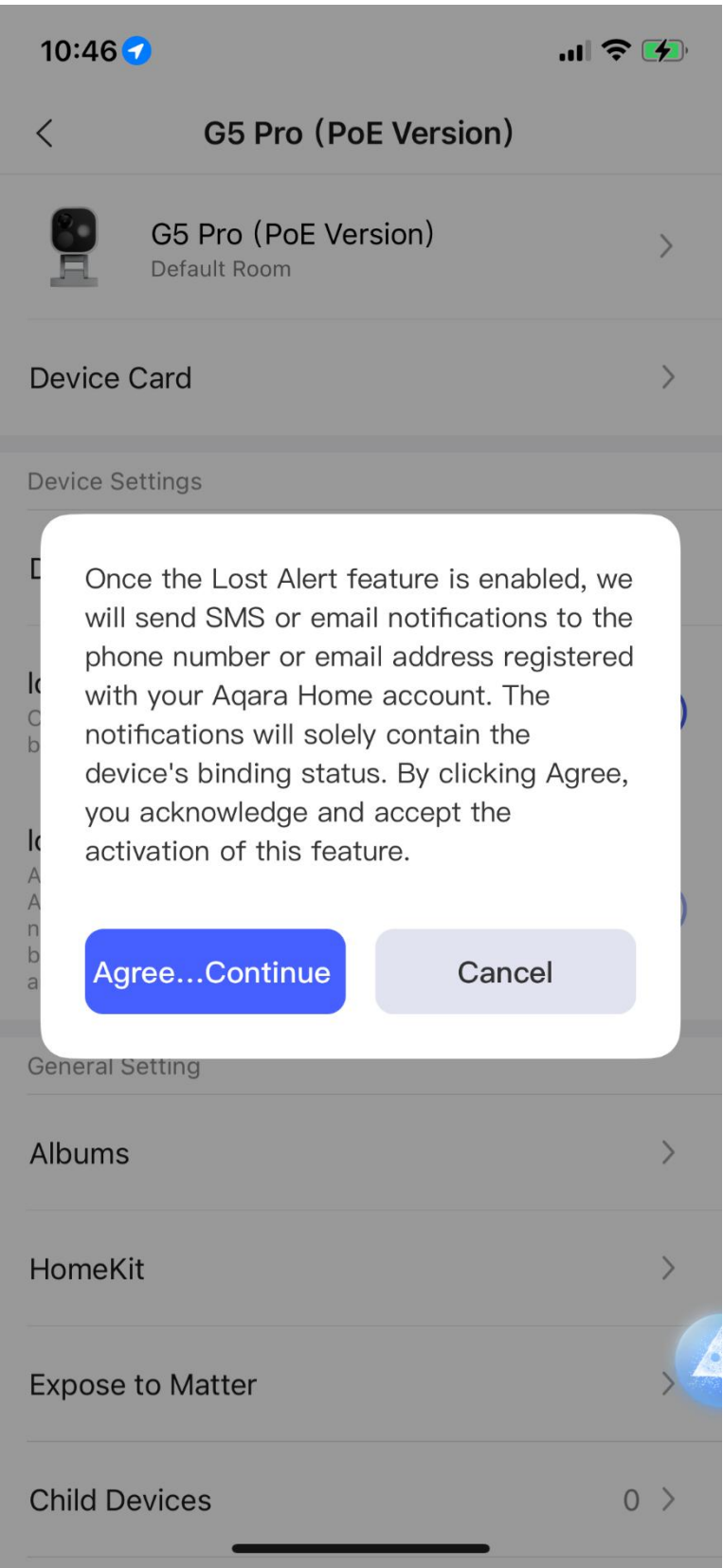
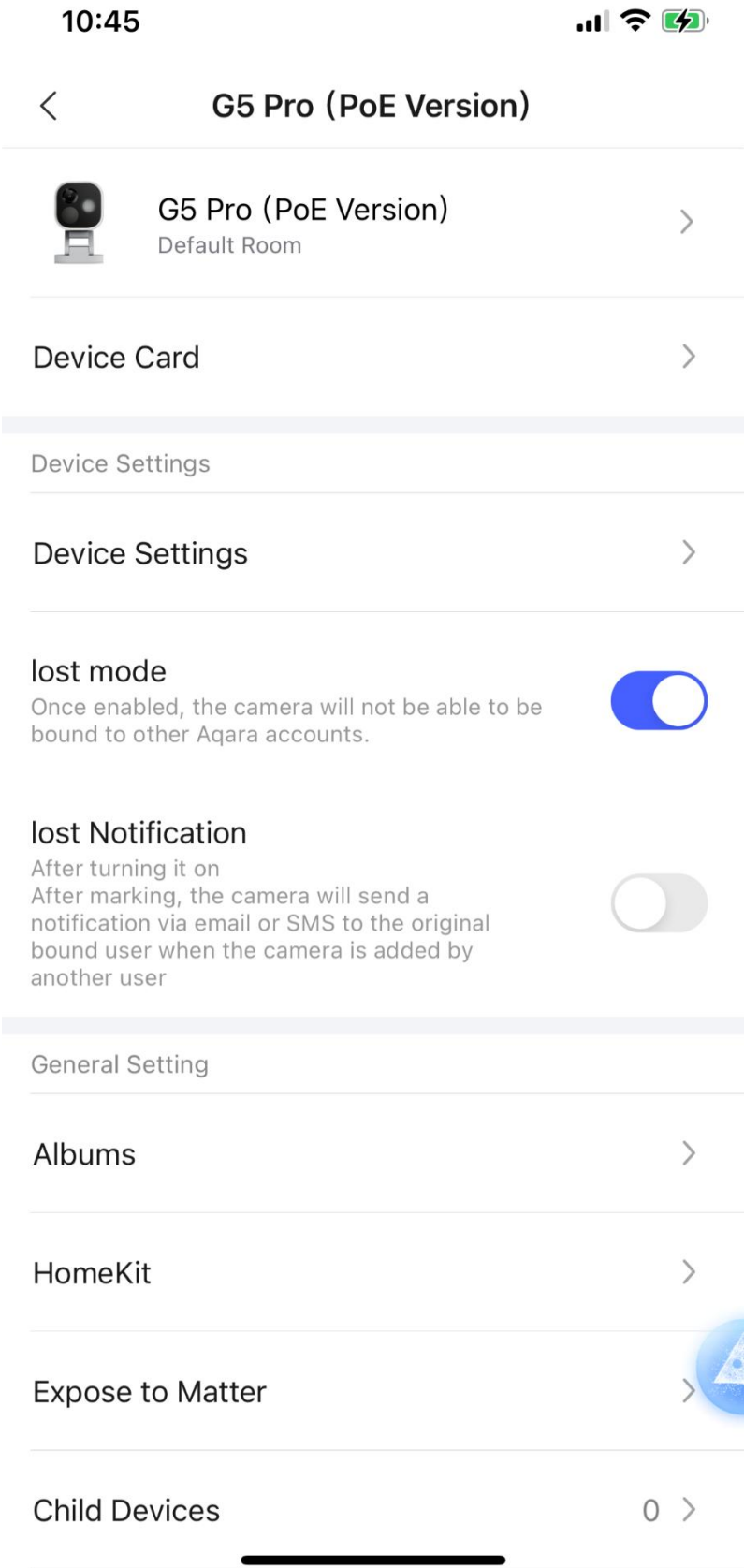
Before Mask



After Mask

Prevent Loss Mode

As Aqara's first self-developed outdoor camera, the G5 Pro introduces a new "Lost Mode" feature. When this mode is activated, the device cannot be unbound by quickly pressing the function button ten times. This mode is designed to prevent unauthorized use of the device if it is stolen. If "Lost Mode" is not deactivated by the user, the device cannot be bound to another Aqara account.



Wide Compatibility

The Smart Camera G5 Pro (PoE Version) supports connectivity with a wide range of third-party ecosystems. In addition to traditional platforms like Apple HomeKit, Google (International version), and Alexa (International version), it now also supports Samsung SmartThings (International version) and the Home Assistant platform. This expansion enhances its versatility and integration capabilities with various smart home systems.



Works with
Apple Home



works with
Google Home

works
with



Home Assistant



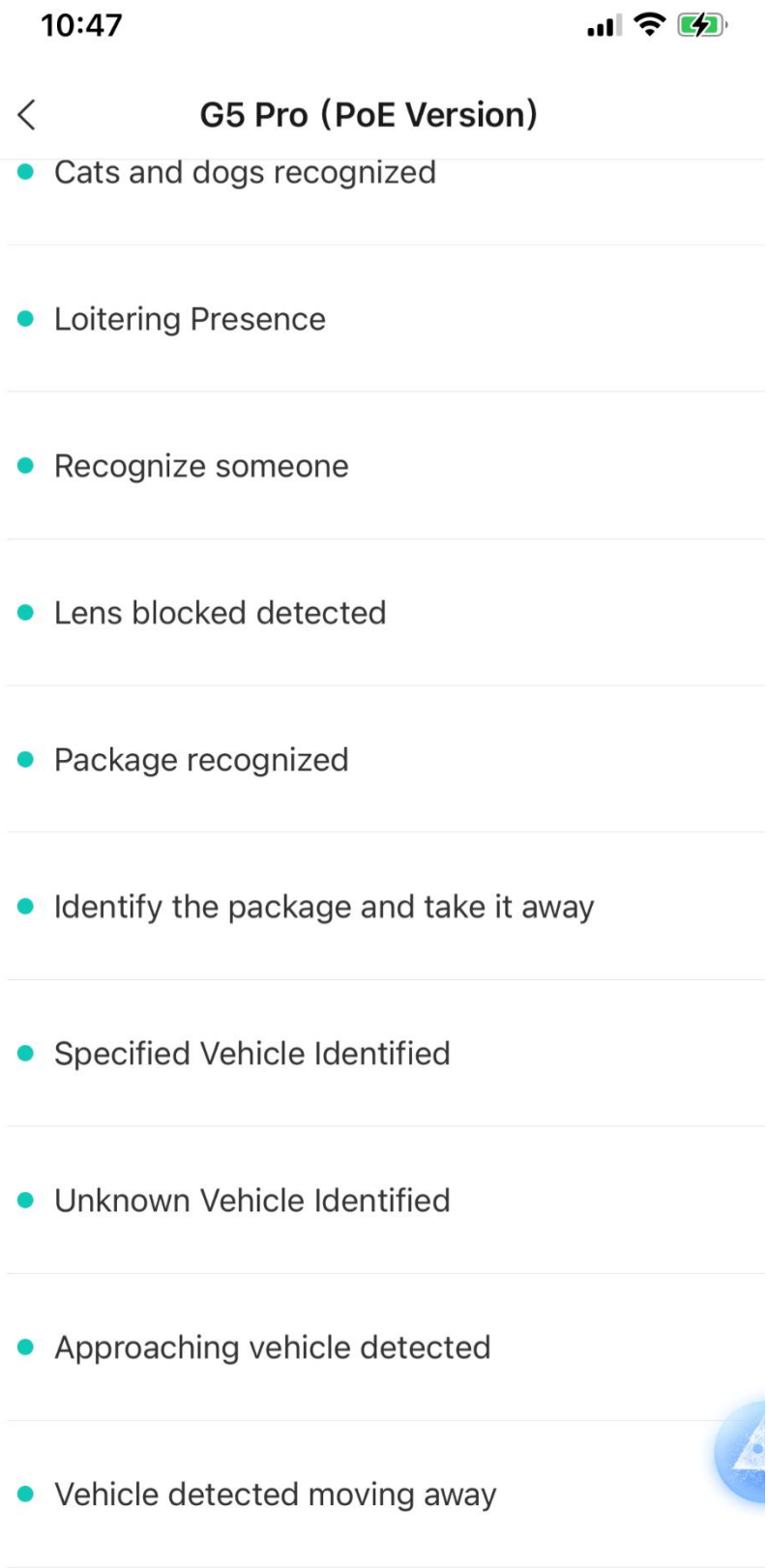
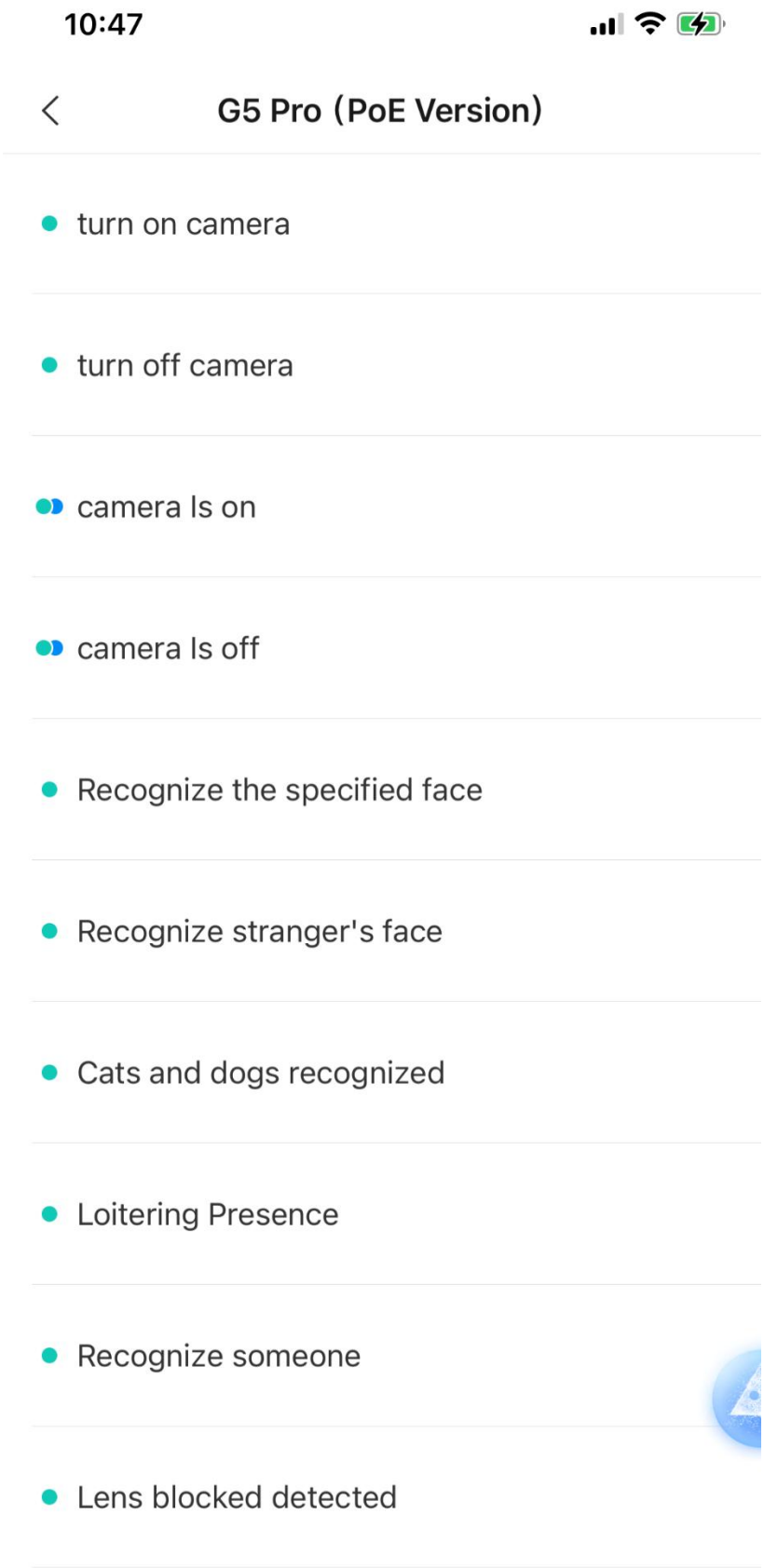
Works with
Samsung SmartThings

Works with

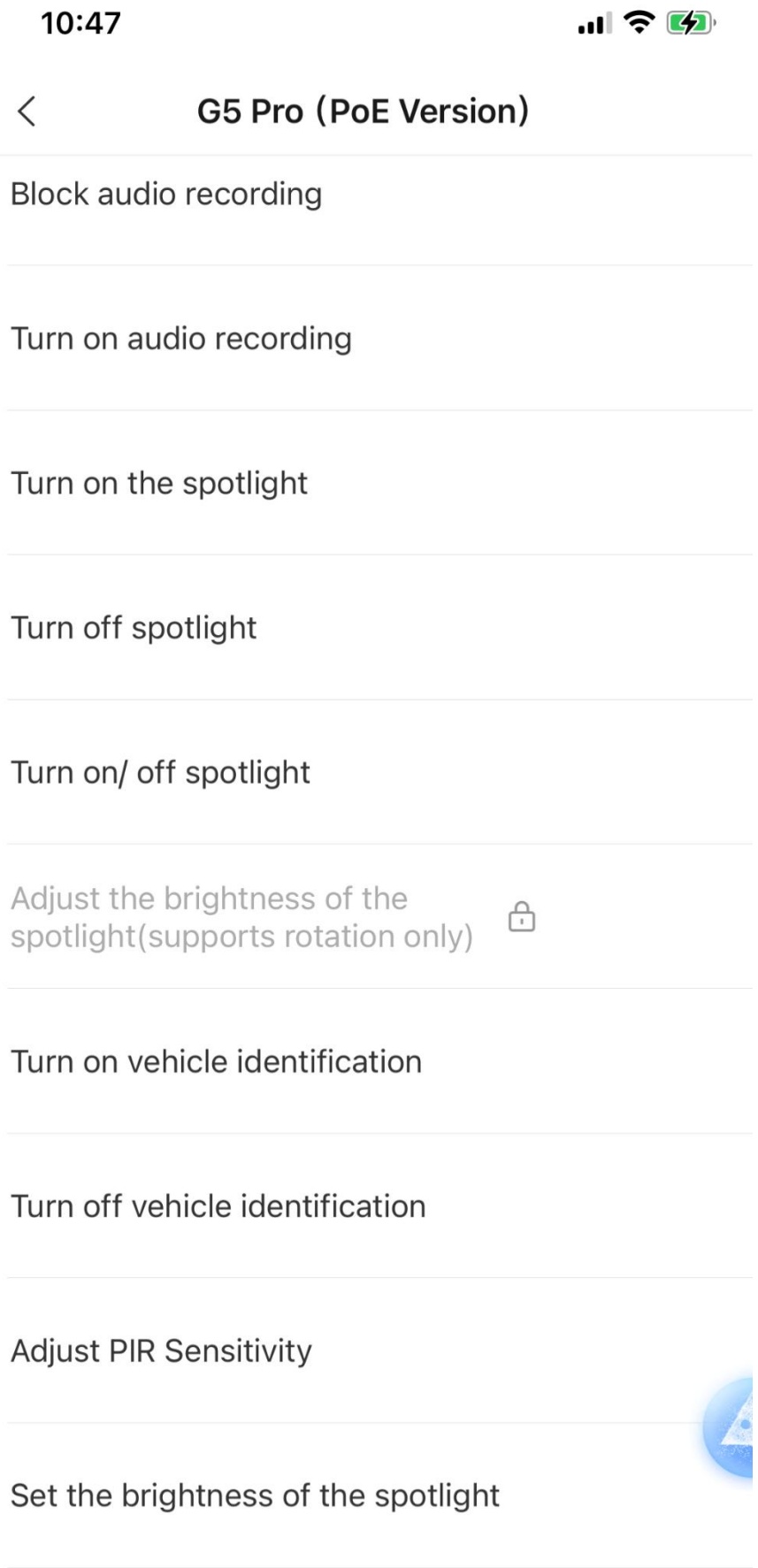
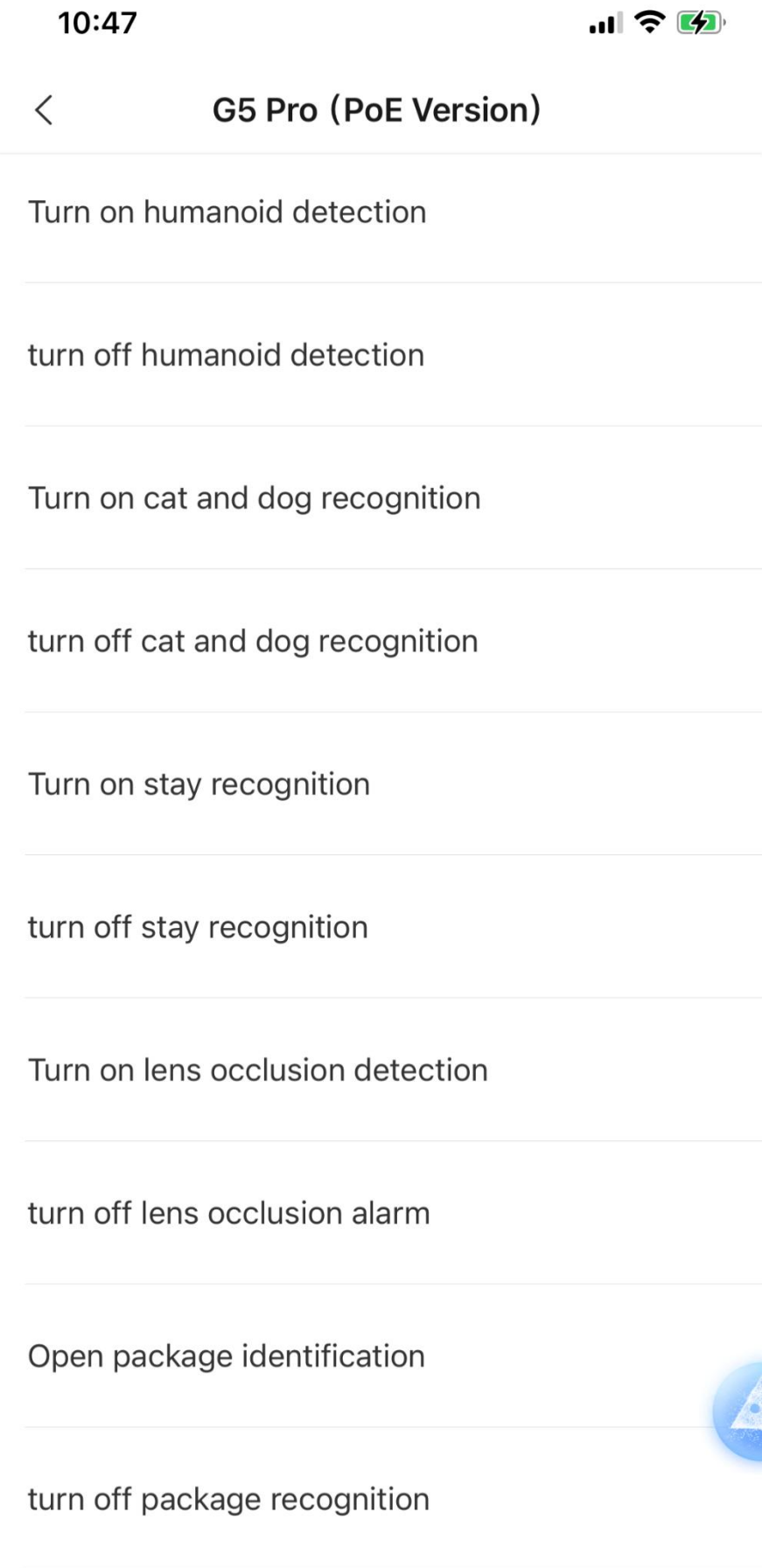
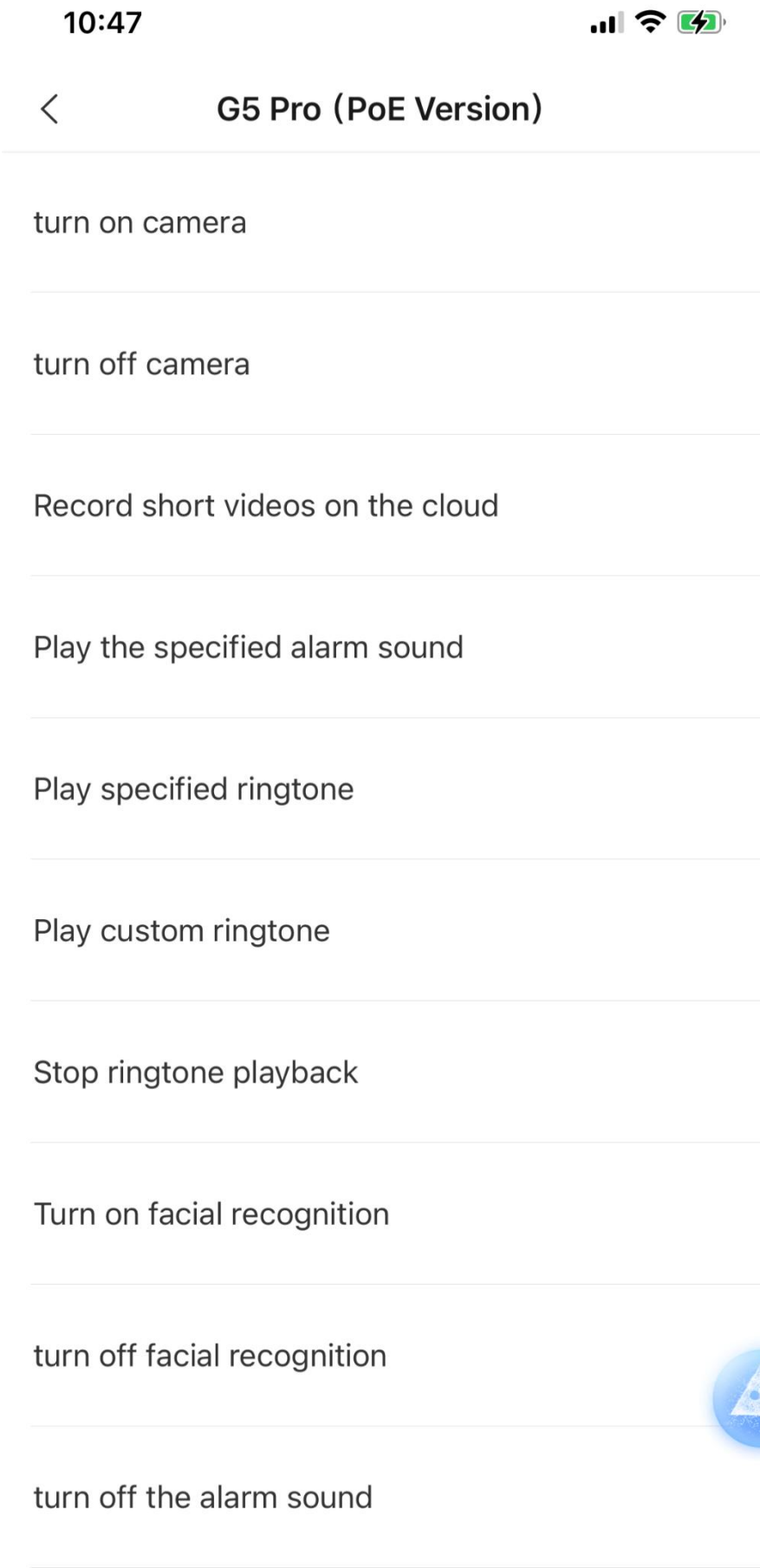
IFTTT

Rich Automation Support

IF



THEN



Paid-Value Added Services

The Smart Camera G5 Pro (PoE Gateway Edition) supports an array of rich paid value-added services. The reason these services require payment is due to the costs involved in developing and providing them, such as server storage resources, AI computing resources, and server bandwidth resources. Compared to basic features, these value-added services offer a superior user experience.

Service Type	Description	Plan	Payment Mode	States of the Service
Paid cloud storage	Paid cloud event video storage service, offering longer storage durations and more secure data	7/30-day rolling storage plan	Monthly/annual, continuous monthly subscription, and two-year plan	Launched
Associated event label	You can configure other Aqara smart hardware to link with the camera to record videos on the cloud, making the types of events more diverse	Free trial for one month	Enjoy immediately after purchasing cloud storage	To be launched
Push message with image	In addition to text messages, a thumbnail image from the time of the event is also included, making the message more intuitive		Enjoy immediately after purchasing cloud storage	To be launched
Cloud time-lapse video	Compared to the free time-lapse photography, you can configure longer storage periods for time-lapse sessions		TBD	To be launched
Package guarding	Monitor the entire process of a package appearing and disappearing		Enjoy immediately after purchasing cloud storage	To be launched

THANK YOU