

5MP (3K) Turret Camera

User Manual



User Manual

Thank you for purchasing our product. If there are any questions, or requests, do not hesitate to contact the dealer.

This manual applies to the model below:

Type	Model
Turret Camera	UK-CA-3K-G1

Note: This camera uses the same mounting system as Hikvision cameras and is compatible with standard Hikvision mounting accessories.

This manual may contain several technical mistakes or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual.

About this Document

- This Document includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only.
- The information contained in the Document is subject to change, without notice, due to firmware updates or other reasons.
- Please use the Document with the guidance and assistance of professionals trained in supporting the Product.

About this Product

This product can only enjoy the after-sales service support in the country or region where the purchase is made.

LEGAL DISCLAIMER

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS DOCUMENT AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". UKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE.

YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW.

Regulatory Information

EU Compliance Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Directive 2014/30/EU (EMCD) and Directive 2011/65/EU (RoHS).

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Safety Instructions

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into "Warnings" and "Cautions".

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

■ Warnings

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 12 VDC according to the IEC60950-1 and IEC62368-1 standard.
- A stabilized 12VDC power supply with a minimum current capacity of 1000 mA must be connected. The required pin size is the standard 5.5 mm.
- It is crucial to use STABILIZED power supplies that maintain a 12V output under any load condition. Utilizing a power supply with a voltage different from 12VDC may cause video noise and, in severe cases, could damage the camera.
- Be cautious with using overly long or thin power extension cables, as they can cause significant voltage drops, particularly when the IR illuminator is activated.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- Do not connect multiple devices to one power adapter to avoid over-heating or a fire hazard caused by overload.
- Make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cord, and then contact the service center.
- Never attempt to disassemble the camera by unprofessional personal.

■ Cautions

- No naked flame sources, such as lighted candles, should be placed on the equipment.
- Install the equipment according to the instructions in this manual.
- To prevent injury, this equipment must be securely attached to the floor/wall in accordance with the installation instructions.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers.
- Do not place the camera in extremely hot, cold (the operating temperature shall be -40°C to 60°C), dusty or damp locations, and do not expose it to high electromagnetic radiation.
- If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently.
- Do not aim the camera at the sun or extra bright places.
- The sensor may be burned out by a laser beam, so when any laser equipment is in using, make sure that the surface of sensor will not be exposed to the laser beam.
- To avoid heat accumulation, good ventilation is required for the operating environment.
- Keep the camera away from liquid while in use for non-water-proof device.
- While in delivery, the camera shall be packed in its original packing, or packing of the same texture.

1 Introduction

1.1 Product Features

The main features are as follows:

- High quality imaging with 5MP (3K) resolution
- High performance CMOS sensor
- OSD menu with configurable parameters
- Multi-format output: TVI, AHD, CVI, and CVBS
- TVI AOC (Audio Over Coax) technology
- Built-in microphone
- 3-axis adjustment
- Compatible with Hikvision mounting accessories
- Smart IR / Hybrid Light support

1.2 Overview

1.2.1 Camera Components

The UK-CA-3K-G1 turret camera consists of the following main components:

- **Main Body:** Houses the image sensor, lens, and processing electronics
- **Enclosure:** Protective dome cover
- **Base:** Mounting base with installation plate
- **Video Cable:** BNC connector for video output
- **Power Cord:** 12VDC power input (5.5mm barrel connector)
- **Format Switch (Joystick):** Mini joystick for switching video formats
- **Microphone:** Built-in audio pickup for TVI AOC

1.3 BNC Video Output

The female bayonet BNC connector allows for the connection of a video cable, which is typically routed to a monitor or DVR using a coaxial cable, such as RG59. Additionally, this connector is compatible with balun converters, enabling the use of different wiring types while maintaining signal integrity.

1.4 Supported Resolutions

The camera supports the following resolutions based on video format:

Video Format	Supported Resolutions
TVI	5MP (3K) @20fps, 4MP @25/30fps, 1080P @25/30fps, 720P
AHD	5MP @20fps, 4MP @25/30fps
CVI	4MP @25/30fps
CVBS	PAL / NTSC

2 Video Format Switching

2.1 Multi-Format Compatibility

This camera is compatible with multiple video formats: **AHD, CVI, TVI, and CVBS**. If you are not getting video output, try switching to a different mode to find which format provides the best picture quality with your DVR.

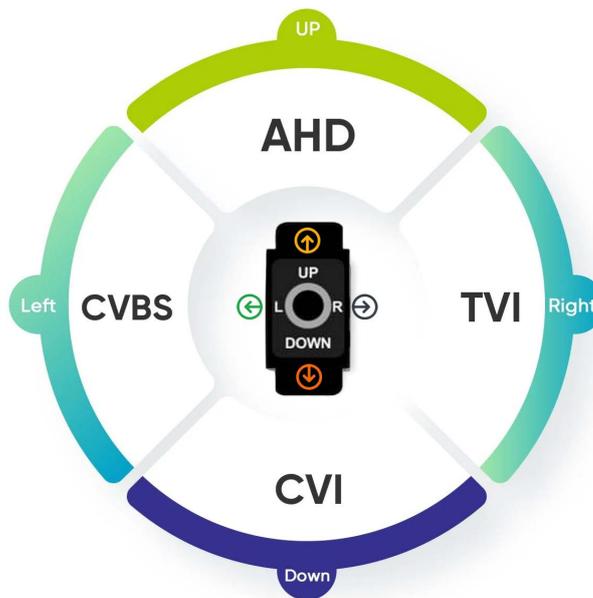
2.2 Switching Method (Joystick Control)

Unlike cameras with a simple switch button, this camera uses a **mini joystick** for format switching. To change the video format:

Gently press and hold the mini joystick in the specified direction for 5 to 7 seconds to change the format.

Direction	Video Format
UP (↑)	AHD
RIGHT (→)	HD-TVI
DOWN (↓)	HD-CVI
LEFT (←)	PAL (CVBS)
CENTER (PRESS)	OSD MENU

Push the button leftward/rightward/upward/downward for 5 seconds



Note: The TVI format is recommended for operating the microphone (Audio Over Coax functionality).

2.3 Comparison with Hikvision Cameras

Feature	UKVISION UK-CA-3K-G1	Hikvision DS-2CE Series
Switch Type	Mini Joystick	Button
Switch Method	Push joystick in direction	Press and hold button
Hold Duration	5-7 seconds	5 seconds
Format Selection	Direction-based (Up/Right/Down/Left)	Cycles through formats
OSD Access	Press joystick center	Call preset No. 95

3 Audio Over Coax (TVI AOC)

3.1 Overview

This camera features an integrated **AOC (Audio Over Coax)** for audio transmission in TVI format. Unlike traditional analog setups, these cameras lack an RCA audio output for connecting a separate audio pair to the DVR. Instead, they are capable of transmitting audio through the same cable used for video.

3.2 Requirements

To utilize the Audio Over Coax technology, you must:

- Set the camera to **TVI format** (push joystick RIGHT for 5-7 seconds)
- Use a DVR that is compatible with **TVI AOC technology**
- Activate **AOC** as the channel audio input within the DVR's settings

3.3 Audio Settings (OSD Menu)

The audio settings can be configured through the OSD menu:

- **AUDIO:** Turn the audio function ON or OFF
- **VOLUME:** Adjust the microphone volume level

***Note:** Audio settings are only available when the camera is set to TVI mode.*

3.4 Troubleshooting Audio

If you are not receiving audio:

1. Verify the camera is set to TVI format
2. Check that your DVR supports TVI AOC
3. Enable AOC in your DVR's audio input settings for the channel
4. Ensure AUDIO is set to ON in the camera's OSD menu
5. Adjust the VOLUME setting if audio is too quiet

If you require additional assistance, please reach out to the camera's seller, who will be more than willing to help you.

4 Installation

Before you start

- Make sure that the device in the package is in good condition and all the assembly parts are included.
- Make sure that all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Check whether the power supply is matched with your power output to avoid damage.
- Make sure the wall is strong enough to withstand three times the weight of the camera and the mount.
- If the product does not function properly, contact your dealer or the nearest service center. DO NOT disassemble the camera for repair or maintenance by yourself.

4.1 Mount Compatibility

This camera uses the same mounting system as Hikvision turret cameras and is compatible with standard Hikvision mounting accessories including:

- Junction boxes
- Wall mounts
- Ceiling mounts
- Inclined ceiling mounts

4.2 Ceiling Mounting without Junction Box

Steps:

1. Paste the drill template (supplied) to the installation location.
2. (Optional) For cement ceiling, drill the screw holes with a 5.5 mm drill and insert the supplied wall plugs.
3. (Optional) Drill the cable hole, when the cables are routed through the ceiling.
4. Secure the installation plate to the ceiling with three PA4 x 25 screws (supplied).
5. Fit the camera onto the installation plate.
6. Turn the camera until it snaps into the installation plate.
7. Connect the power cord (12VDC) and video cable (BNC).
8. Power on the camera to adjust the view angle.

4.3 3-Axis Adjustment

After installation, adjust the camera view angle:

- **Pan Position [0° to 360°]:** Rotate the enclosure
- **Tilt Position [0° to 75°]:** Move the main body up and down
- **Rotation Position [0° to 360°]:** Rotate the main body

4.4 Mounting with Junction Box

Steps:

1. Loosen screws to take apart the junction box.
2. Paste the drill template for junction box to the installation location.
3. (Optional) For cement ceiling, drill the screw holes with a 5.5 mm drill and insert the supplied wall plugs.
4. (Optional) Drill the cable hole, when the cables are routed through the ceiling.
5. Secure the junction box body on the ceiling with screws.
6. Fix the camera/installation plate to the junction box cover.

7. Route the cables through the bottom cable hole or the side cable hole of the junction box.
8. Connect the cables and adjust the angle to finish installation.

5 OSD Menu Configuration

5.1 Accessing the OSD Menu

To access the On-Screen Display (OSD) menu:

1. Connect the camera to your TVI DVR and monitor.
2. Power on the camera, DVR, and monitor to view the image.
3. **Press the joystick center (straight down)** to call the camera menu.
4. Use up/down on the joystick to select menu options.
5. Press the joystick center to confirm selection.
6. Use left/right to adjust values.

5.2 Menu Structure

- **VIDEO FORMAT** - Select output format and resolution
- **EXPOSURE** - Exposure mode, AGC, Anti-banding settings
- **LIGHTING SETTINGS** - IR/White light mode, Smart IR, Threshold
- **VIDEO SETTINGS** - Image mode, White balance, Brightness, Contrast, Sharpness, Saturation, DNR
- **AUDIO SETTINGS** - Audio on/off, Volume (TVI mode only)
- **FACTORY DEFAULT** - Reset all settings
- **EXIT** - Exit without saving
- **SAVE & EXIT** - Save settings and exit

5.3 Video Format Options

Video Output	Available Formats
TVI	3K @20fps, 4MP @25fps, 4MP @30fps, 2MP @25fps, 2MP @30fps
AHD	5MP @20fps, 4MP @25fps, 4MP @30fps
CVI	4MP @25fps, 4MP @30fps
CVBS	PAL, NTSC

5.4 Exposure Modes

- **GLOBAL**: Normal exposure mode which adjusts lighting distribution and variations.
- **BLC (Backlight Compensation)**: Compensates light to objects in front to make them clear.
- **HLC (Highlight Compensation)**: Detects and reduces brightness of strong spots to improve overall images.
- **WDR (Wide Dynamic Range)**: Balances brightness when both very bright and dark areas exist simultaneously.
- **HLS (Highlight Suppression)**: Areas exceeding brightness threshold become black for clearer overall image.

5.5 Video Settings

- **IMAGE MODE**: STD (Standard), HIGH-SAT (High Saturation), or HIGHLIGHT (better indoor facial details)
- **WHITE BALANCE**: AUTO or MANUAL (adjust R-GAIN/B-GAIN)
- **BRIGHTNESS**: Adjust image brightness (1-9)
- **CONTRAST**: Enhance difference in color and light between parts of image
- **SHARPNESS**: Determines amount of detail the imaging system can reproduce
- **SATURATION**: Adjust proportion of pure chromatic color

- **DNR:** Digital Noise Reduction to reduce noise in video stream

6 Waterproof Measures

If the camera is installed outdoor, you should use waterproof tapes to waterproof the cables. Otherwise the cables might get wet or a short circuit occurs.

Note: Waterproof tapes should be purchased separately.

After routing and connecting the cables, use the waterproof tapes to wrap up the cables. Both connected cables and spare cables should be wrapped up to prevent water ingress.

Waterproofing Steps:

1. Ensure all cable connections are secure.
2. Start wrapping from below the connection point and work upward.
3. Overlap each layer by at least 50%.
4. Extend the tape at least 30mm beyond the connection on both sides.
5. Wrap spare/unused cables in the same manner.
6. Ensure no gaps or exposed areas remain.

7 Specifications

Parameter	Specification
Model	UK-CA-3K-G1
Image Sensor	High Performance CMOS
Max Resolution	5MP (3K) - 2880 × 1620
Video Output	TVI / AHD / CVI / CVBS (switchable)
Audio	Built-in microphone with TVI AOC
Power Supply	12VDC (stabilized), min 1000mA
Power Connector	5.5mm barrel jack
Video Connector	BNC (female bayonet)
Operating Temp	-40°C to 60°C
IR / Light	Smart IR / Hybrid Light
Adjustment	3-axis (Pan 0-360°, Tilt 0-75°, Rotation 0-360°)
Mount Compatibility	Hikvision standard mounts
OSD Menu	Yes (via joystick)
Format Switching	Joystick directional (5-7 sec hold)

Quick Reference - Format Switching

Action	Method
Switch to AHD	Push joystick UP for 5-7 seconds
Switch to HD-TVI	Push joystick RIGHT for 5-7 seconds
Switch to HD-CVI	Push joystick DOWN for 5-7 seconds
Switch to PAL/CVBS	Push joystick LEFT for 5-7 seconds
Open OSD Menu	Press joystick CENTER

For technical support, please contact your seller or dealer.