



# 4K Smart Hybrid Light AUDIO Fixed 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 models below:

Model
DS-2CE10UF3T-LS
DS-2CE10UF3T-LSYE
DS-2CE12UF3T-LS
DS-2CE12UF3T-LSYE
DS-2CE72UF3T-LS
DS-2CE72UF3T-LSYE

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- This Document includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only.
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- Please use the Document with the guidance and assistance of professionals trained in supporting the Product.

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## 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). Note: The products with the input voltage of within 50 to 1000 VAC or 75 to 1500 VDC comply with Directive 2014/35/EU (LVD), and the rest products comply with Directive 2001/95/EC (GPSD). Please check the specific power supply information for reference.



Directive 2012/19/EU (WEEE Directive):

Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or

dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info).



Regulation (EU)

2023/1542(Battery

Regulation): This product contains a battery and it is in conformity with the Regulation (EU) 2023/1542.

The battery cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), or lead (Pb). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info).

### Industry Canada ICES-003 Compliance

This device meets the CAN ICES-003 (A)/NMB-3(A) standards requirements.

### KC

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### 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 Instruction

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.

	
<b>Warnings</b> Follow these safeguards to prevent serious injury or death.	<b>Cautions</b> Follow these precautions to prevent potential injury or material damage.



### 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. Refer to technical specifications for detailed information.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- An all-pole mains switch shall be incorporated in the electrical installation of the building.
- 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.
- Do not expose the device to high electromagnetic radiation or extremely hot, cold, dusty or damp environment.
- 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.
- The beam of the light at the distance of 200 mm is classified as Risk Group 1 (RG1). Possible hazardous optical radiation emitted from this product.
- DO NOT stare at operating light source. May be harmful to the eyes.
- Wear appropriate eye protection or turn on the supplement light only at a safe distance (0.5 m) or in the area that is not directly exposed to the light when installing or maintaining the device.

## 1 Overview of Cables

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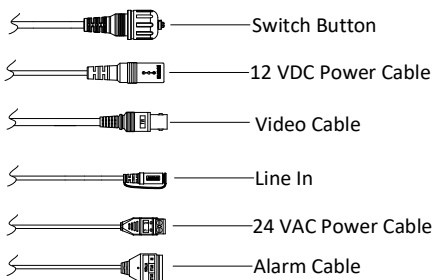


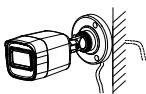
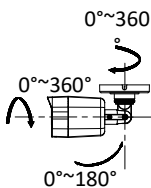
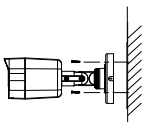
Figure 1-1 Cable Description

### Notes:

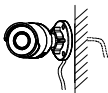
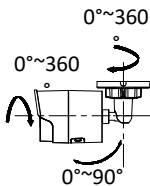
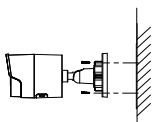
The cables vary depending on different camera models.

## 2 Installation

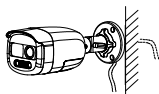
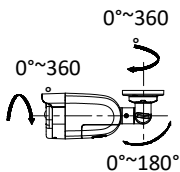
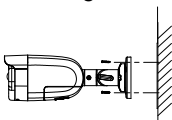
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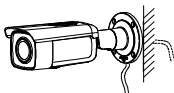
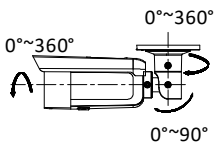
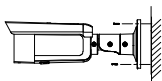
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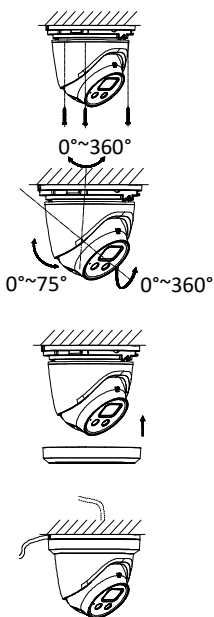
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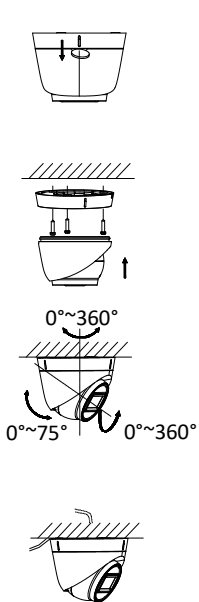
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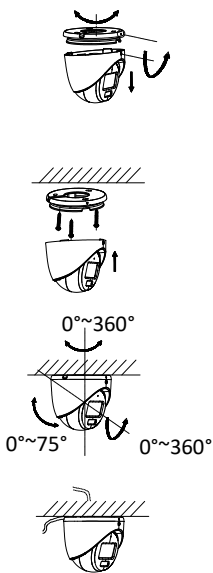
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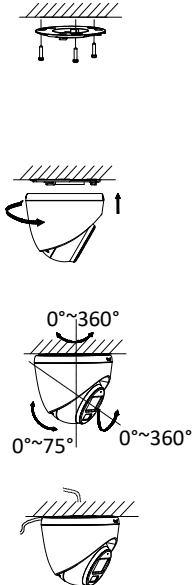
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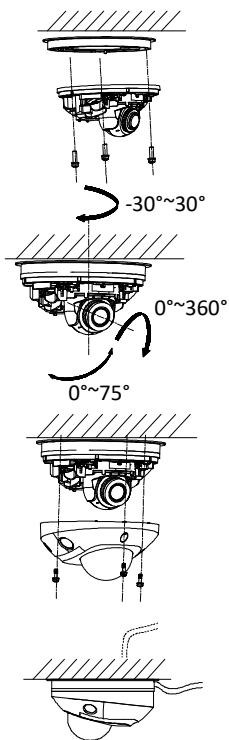
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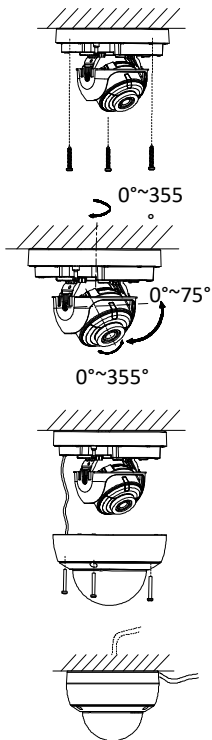
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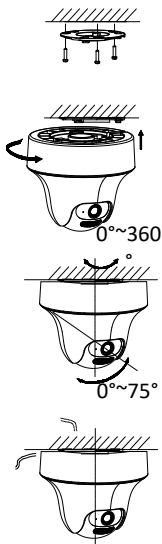
9



10



11





## 3 Waterproof Measures

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If the camera is installed outdoor, you should use the 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. Connected cables and spare cables both should be wrapped up.

## 4 Menu Description

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Please follow the steps below to call the menu.

**Note:**

The actual display may vary with your camera model.

**Steps:**

1. Connect the camera with the TVI DVR and the monitor, as shown in figure 3-1.

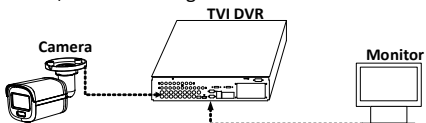



Figure 4-1 Connection

2. Power on the camera, TVI DVR, and monitor to view the image on the monitor.
3. Click PTZ Control to enter the PTZ Control interface.
4. Call the camera menu by clicking  button or calling preset No. 95.

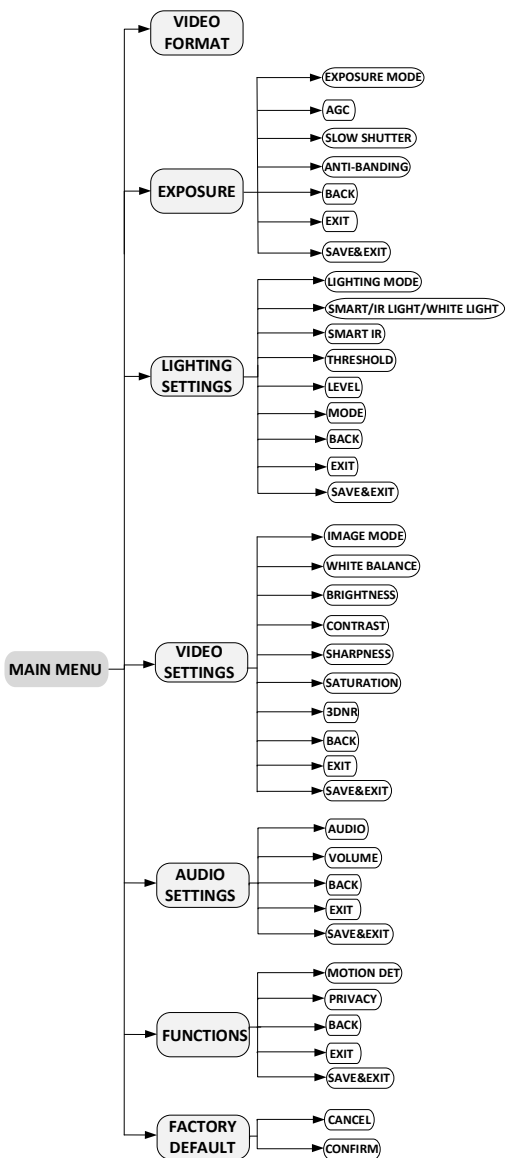


Figure 4-2 Main Menu Overview

5. Click the direction buttons to control the camera.
  - 1). Click up/down direction buttons to select menu options.
  - 2). Click Iris + to confirm the selection.
  - 3). Click left/right direction buttons to adjust the value of the selected option.

## 4.1 VIDEO FORMAT

4K@12.5 fps, 4K@15 fps, 3K@20 fps, 3K@25 fps  
4MP@25 fps, 4MP@30 fps, 2 MP@25 fps, and  
2MP@30 fps are available.

## 4.2 EXPOSURE

### EXPOSURE MODE

You can set the **EXPOSURE MODE** to **GLOBAL**, **FACE AE**, **BLC**, **HLC**, and **WDR**.

- **GLOBAL**

**GLOBAL** refers to the normal exposure mode which adjusts lighting distribution, variations, and non-standard processing.

- **FACE AE**

**FACE AE** (Face Auto Exposure) can automatically adjust the camera's exposure settings to prioritize the brightness of faces it detects. When the function is enabled, a green frame is displayed for about 10 s around the detected face.

- **BLC (Backlight Compensation)**

The **BLC** (Backlight Compensation) function can compensate light to the object in the front to make it clear, but this may cause over-exposure of the background where the light is strong.

- **HLC (Highlight Compensation)**

**HLC** stands for highlight compensation. The camera detects strong spots (over-exposure portion of image) and reduces the brightness of strong spots to improve the overall images.

- **WDR (Wide Dynamic Range)**

The **WDR** (Wide Dynamic Range) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.

### **AGC (Auto Gain Control)**

It optimizes the clarity of the image in poor light conditions. The **AGC** level can be set to **HIGH**, **MEDIUM**, or **LOW**.

**Note:**

The noise will be amplified when setting the **AGC** level.

### **SLOW SHUTTER**

**SLOW SHUTTER** increases the exposure time on a single frame, which makes a camera more sensitive to the light so it can produce images even in low lux conditions. You can set the **SLOW SHUTTER** function to OFF, ×2, ×4, ×8, or ×16 according to the different light conditions.

**Note:**

- **SLOW SHUTTER** is not supported by models with -YE. Please refer to the actual product.
- **SLOW SHUTTER** is not supported for the 4K video format. The option of ×16 is not supported for the 3K@20 fps video format.

### **ANTI-BANDING**

**ANTI-BANDING** is to prevent the phenomenon of horizontal lines (banding) when photographing images in low frequency light or high brightness environments.

**Note:**

**ANTI-BANDING** and **FACE AE** cannot be enabled at the same time.

## 4.3 LIGHTING SETTINGS

### LIGHTING MODE

SMART, IR and WHITE LIGHT are available.

#### ➤ SMART/IR

- IR LIGHT

You can turn on/off the **IR LIGHT** to meet the requirements of different circumstances.

- SMART IR

The **Smart IR** function is used to adjust the light to its most suitable intensity, and prevent the image from over exposure.

- D→N Threshold (Day to Night Threshold)

**Day to Night Threshold** is used to control the sensitivity of switching the day mode to the night mode. You can set the value from 1 to 9. The larger the value is, the more sensitive the camera is.

- N→D Threshold (Night to Day Threshold)

**Night to Day Threshold** is used to control the sensitivity of switching the night mode to the day mode. You can set the value from 1 to 9. The larger the value is, the more sensitive the camera is.

#### ➤ WHITE LIGHT

Under the **WHITE LIGHT** sub-menu, you can set the mode to **OFF** or **AUTO**.

- OFF

Set it to **OFF** to give up this function.

- AUTO

You can set **THRESHOLD** and **LEVEL** in this section.

### THRESHOLD

The higher the threshold is, the more sensitive the device is to dark environment.

### LEVEL

You can adjust the maximum brightness of supplement light.

### MODE

You can set how the camera optimizes video smoothness under low-light conditions.

#### **Note:**

**Mode** is not supported for 3K@20 fps or 4K video formats.

- MODE1

When you select **MODE1**, the camera automatically reduces video frame rate. It enhances visibility under low-light conditions by extending exposure time (typically doubling it), but may result in slightly less fluid motion.

- MODE2

When you select **MODE2**, the camera maintains a constant frame rate. It prioritizes fluid motion under low-light conditions but may increase visible noise (graininess) in darkness.

## 4.4 VIDEO SETTINGS

Move the cursor to **VIDEO SETTINGS** and click Iris+ to enter the submenu. **IMAGE MODE**, **WHITE BALANCE**, **BRIGHTNESS**, **CONTRAST**, **SHARPNESS**, **SATURATION** and **DNR** are adjustable.

VIDEO SETTINGS	
IMAGE MODE	◀ STD ▶
WHITE BALANCE	↵
BRIGHTNESS	◀ 5 ▶
CONTRAST	◀ 5 ▶
SHARPNESS	◀ 5 ▶
SATURATION	◀ 5 ▶
3DNR	◀ 5 ▶
BACK	↵
EXIT	↵
SAVE & EXIT	↵

Figure 4-3 VIDEO SETTINGS

## IMAGE MODE

**IMAGE MODE** is used to adjust the image saturation, and you can set it to **STD** (Standard), **HIGH-SAT** (High Saturation), or **HIGHLIGHT** (better indoor facial details).

## WHITE BALANCE

White balance, the white rendition function of the camera, is to adjust the color temperature according to the environment. It can remove unrealistic color casts in the image. You can set **WHITE BALANCE** mode to **AUTO**, or **MANUAL**.

### ● AUTO

Under **AUTO** mode, white balance is being adjusted automatically according to the color temperature of the scene illumination.

### ● MANUAL

You can set the **R-GAIN/B-GAIN** value from 1 to 255 to adjust the shades of red/blue color of the image.

WHITE BALANCE	
MODE	◀ MANUAL ▶
R-GAIN	◀ 64 ▶
B-GAIN	◀ 64 ▶
BACK	↵
EXIT	↵
SAVE&EXIT	↵

Figure 4-4 WHITE BALANCE

## BRIGHTNESS

Brightness refers to the brightness of the image. You can set the brightness value from 1 to 9 to darken or brighten the image. The greater the value is, the brighter the image is.

## CONTRAST

This feature enhances the difference in color and light between parts of an image.

## SHARPNESS

Sharpness determines the amount of detail an imaging system can reproduce.

## SATURATION

Saturation is the proportion of pure chromatic color in the total color sensation. Adjust this feature to change the saturation of the color.

## 3DNR

The 3DNR function can decrease the noise effect, especially when capturing moving images in poor light conditions and delivering more accurate and sharp image. You can set the 3DNR value from 1 to 9.

## 4.5 AUDIO SETTINGS

### AUDIO

You can turn on or off the sound pickup function of the microphone under this sub-menu.

### VOLUME

You can adjust the microphone volume level under this sub-menu.

## 4.6 FUNCTIONS

### MOTION DET

The **MOTION DET** function helps to detect the moving objects in the detection area. When enabling the function, you can set up to four detection areas. Each area can be individually enabled or disabled, and its size, position, color, and transparency can be adjusted separately.

### PRIVACY

The **PRIVACY** function blocks certain areas in the live view to protect privacy. No matter how the device moves, the blocked scene will never be seen. You can set up to four masking areas. Each area can be individually enabled or disabled, and its size and position can be adjusted separately.

## 4.7 FACTORY DEFAULT

Reset all the settings to factory defaults.

**UD43211B**