



## 2 MP Two-Way Talk & Siren 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-2CE78D0T-LXTS
DS-2CE70D0T-PTLXTS
DS-2CE17D0T-LXTS
DS-2CE16D0T-LXTS
DS-2CE16D0T-LPXTS
DS-2CE78D0T-LTS
DS-2CE70D0T-PTLTS
DS-2CE17D0T-LTS
DS-2CE16D0T-LTS
DS-2CE16D0T-LPTS
DS-2CE19D0T-LTS
DS-2CE19D0T-LXTS
DS-2CE16D0T-LXTS/A
DS-2CE16D0T-LPXTS/A
DS-2CE78D0T-LXTS/A
DS-2CE78D0T-LPXTS
DS-2CE78D0T-LPTS

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. We will readily improve or update the products or procedures described in the manual.

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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).

According to the Batteries and Accumulators (Placing on the Market) Regulations 2008 and the Waste Batteries and Accumulators Regulations 2009: This product contains a battery that cannot be disposed of as unsorted municipal waste in the United Kingdom. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). 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  $-40^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ ), 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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### 1.1 Cable Description

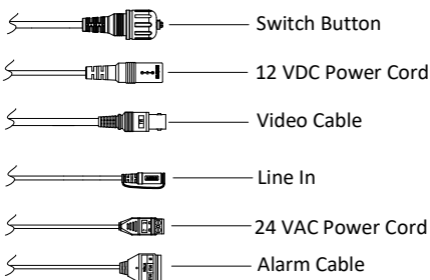


Figure 1-1 Cable Description

#### **Notes:**

The cables vary depending on different camera models.

## 1.2 Doorbell and Gate Opener/Lock Connection

For the camera with an alarm cable, you can connect the alarm cable to the doorbell and the gate opener or lock. Connect the "IN" interface to the doorbell, and the "OUT1" and "OUT2" interfaces to the gate opener or lock. The power output from the gate opener or lock to the camera via the alarm output interface should be below 30 VDC at 1 A.

For detailed power requirements, please refer to the product specifications.

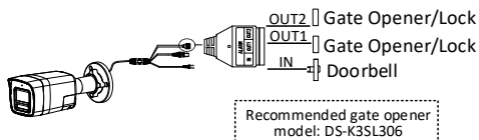


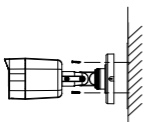
Figure 1-2 Doorbell and Gate Opener/Lock Connection

### Notes:

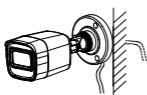
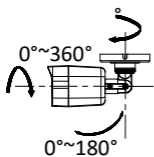
The figure illustrates the alarm cable connection to the doorbell and the gate opener or lock. Please refer to the actual product for the product appearance and cables.

## 2 Installation

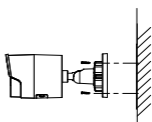
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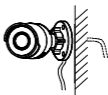
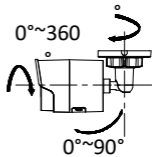
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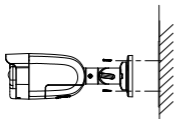
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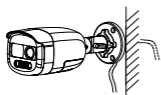
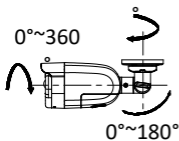
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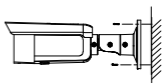
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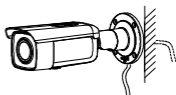
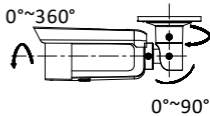
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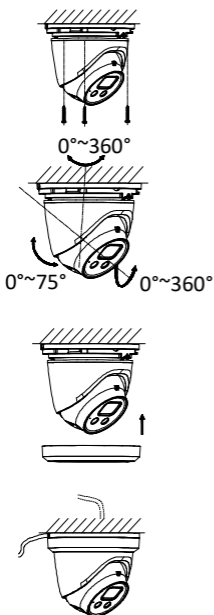
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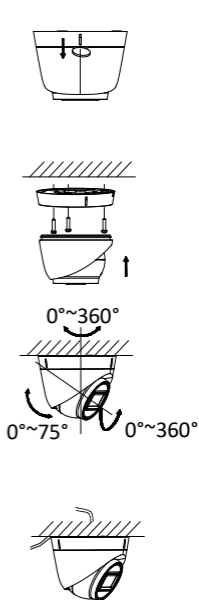
$0^{\circ}\sim 360^{\circ}$



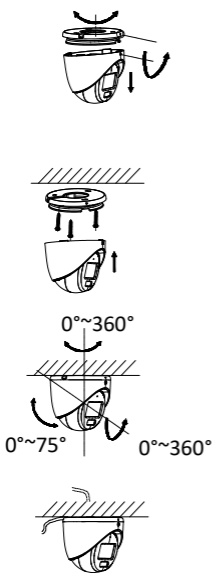
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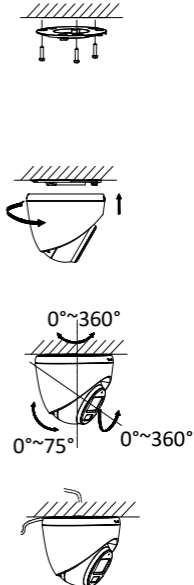
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7

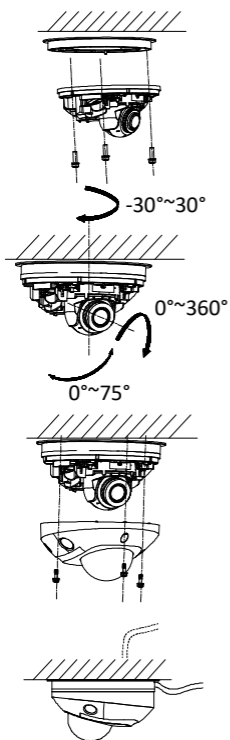


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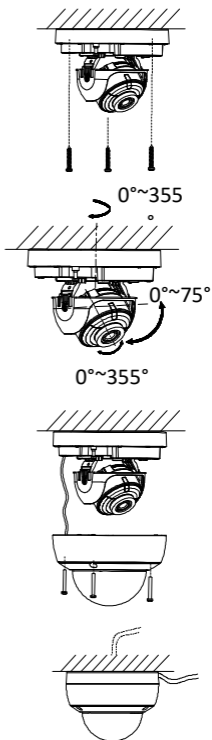




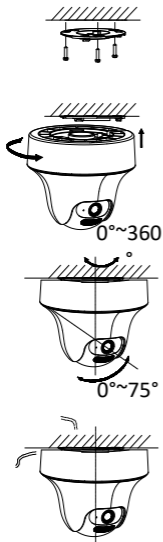
9



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 as the figures below.

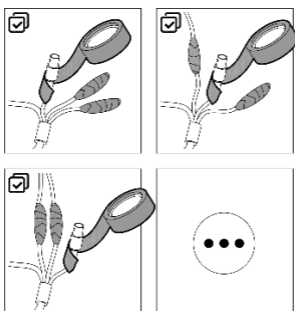


Figure 3-1 Waterproof Cables

## 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.

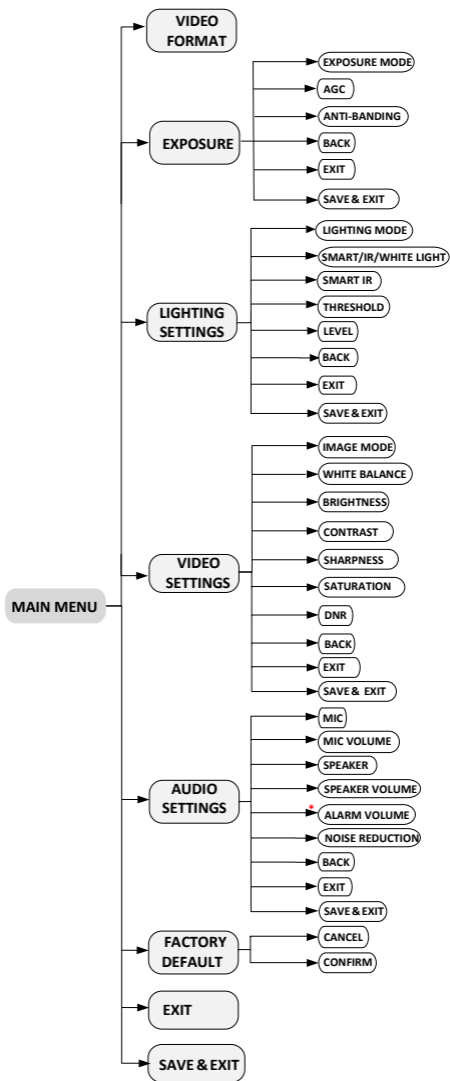


Figure 4-2 Main Menu Overview

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

Video formats are available as below.

Power	Video Format
TVI	2 MP@25 fps 2 MP@30 fps

## 4.2 EXPOSURE

### EXPOSURE MODE

You can set the **EXPOSURE MODE** to **GLOBAL**, **BLC**, **HLC**, **DWDR**, or **HLS**.

- **GLOBAL**

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

- **BLC (Backlight Compensation)**

**BLC (Backlight Compensation)** compensates 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.

- **DWDR (Digital Wide Dynamic Range)**

**Digital wide dynamic range** gives the camera the ability to view dark areas of the given image as well as extremely lighted portions of the image, or areas of high contrast.

- **HLS (Highlight Suppression)**

It is the same visual effect as the solar eclipse. If the brightness of a part in the image exceeds the threshold, this part will become black. Then whole image can be clear.

### **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.

### **ANTI-BANDING**

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

## 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.

## **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 ▶
DNR	◀ 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 to adjust the shades of red/blue color of the image.

WHITE BALANCE	
MODE	◀ MANUAL ▶
R-GAIN	◀ 5 ▶
B-GAIN	◀ 5 ▶
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.

## **DNR**

DNR refers to digital noise reduction. This function reduces noise in video stream.

## **4.5 AUDIO SETTINGS**

### **MIC**

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

### **MIC VOLUME**

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

### **SPEAKER**

You can turn on or off the speaker function under this sub-menu.

### **SPEAKER VOLUME**

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

### **ALARM VOLUME**

You can set the alarm volume level under this sub-menu. The **ALARM VOLUME** can be set to **HIGH**, **MEDIUM**, or **LOW**.

#### **Note:**

Only certain models support the function.

### **Noise Reduction**

You can turn on the **Noise Reduction** to reduces noise in audio.

## **4.6 FACTORY DEFAULT**

Reset all the settings to factory defaults.

## **4.7 EXIT**

Move the cursor to **EXIT** and click Iris+ to exit the menu.

## **4.8 SAVE & EXIT**

Move the cursor to **SAVE & EXIT** and click Iris+ to save the settings and exit the menu.

**UD36304B-C**