HIKVISION

TURBO HD
720P Dome Camera
User Manual

UD.6L0201D1473A01

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.
This manual applies to DS-2CE56C5T-(A)VFIR and DS-2CE56C5T-(A)VPIR3.
This manual may contain several technical incorrect places 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.

Regulatory Information
FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity 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 Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

2012/19/EC (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.

2006/66/EC (battery directive): This product contains a battery that 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), 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.

1 Introduction

1.1 Product Features
This camera adopts new generation sensor with high sensitivity and advanced circuit board design technology. It possesses the features of high resolution, low distortion, and low noise, etc. It is extremely suitable for supervisory system and image processing system.
The main features are as follows:
- High performance CMOS sensor and high resolution bring high-quality image;
- Low illumination, 0.01 Lux @ (F1.2, AGC ON), 0 Lux with IR;
- Support IR cut filter with auto switch;
- OSD menu, parameters are configurable;
- Support auto white balance, auto gain control, electronic shutter control and internal synchronization;
- Advanced engineering design and patent universal adjustable structure provides convenient adjustment and high reliability; lSMART IR mode;
- Unit transmission control;
- Advanced 3-axis design meets different installation requirements;
- Ingress protection: IP66.

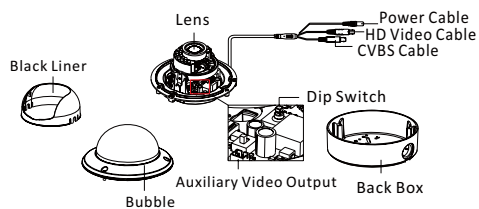## 1.2 Overview
1.2.1 Overview of Type I Dome Camera

Figure 1-1 Overview of Type I Dome Camera
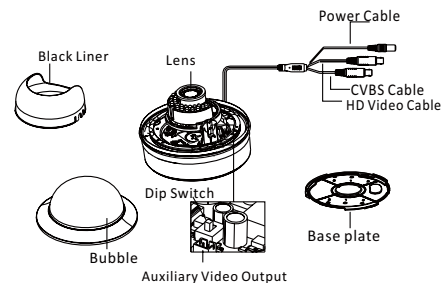
1.2.2 Overview of Type II Dome Camera

Figure 1-2 Overview of Type II Dome Camera

The HD video output mode is set as the default. You can press the dip switch to switch the mode as CVBS output.

2 Installation
Before you start:
- Please 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.
- Please make sure the wall is strong enough to withstand three times the weight of the camera and the mounting.
- If the wall is the cement wall, you need to insert expansion screws before you install the camera. If the wall is the wooden wall, you can use self-tapping screw to secure the camera.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.

2.1 Ceiling Mounting
Steps:

1.Drill the screw holes and the cable hole on the ceiling according to the supplied drill template.
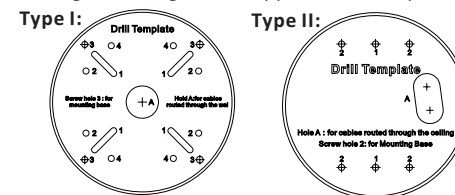

Figure 2-1 The Drill Template

2.Loosen the screws on the bubble of type 1 camera /rotate the bubble of type2 camera to remove the bubble and the black liner.
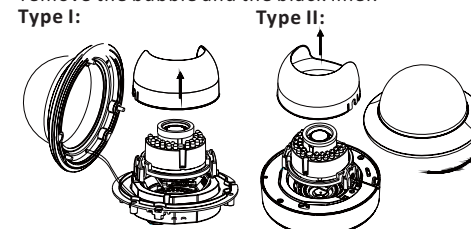

Figure 2-2 Remove the Bubble

3.Attach the back box of type 1 camera /base plate of type2 camera to the ceiling and secure them with supplied self-tapping screws.
4.Route the cables through the cable hole.
5.Align the camera with the back box/base plate, and tighten the set screws to secure the camera with the back box/base plate.
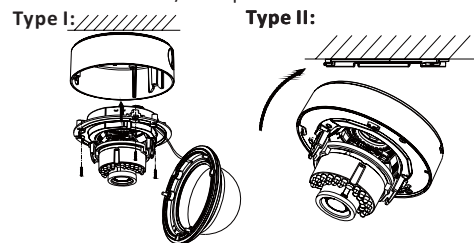
Type I: **Type II:**

Figure 2-3 Fix the Camera

6. Connect the corresponding cables.
7. Adjust the camera according to the figure below to get an optimum angle
8. Fit the black liner on the camera and tighten the screws on the bubble of type 1 camera or rotate the bubble of type 2 camera to complete.
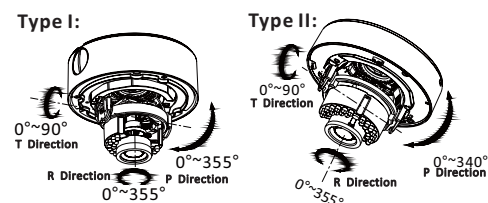
Type I: **Type II:**

0°~90° T Direction
R Direction 0°~355° P Direction
0°~355°

0°~90° T Direction
0°~355°
0°~340° P Direction
R Direction

Figure 2-4 Zoom and Focus Adjustment

2.2 In-ceiling Mounting

NOTE

You need to purchase an in-ceiling mount separately if you adopt in-ceiling mounting.
Steps:

1.Drill the screw holes and the cable hole in the ceiling according to the supplied drill template.
2.Screw the bolts through the mount by aligning with the 2 bolt holes. Fit the toggles onto the bolts.
3.Push the two toggle bolts through the two screw holes on the ceiling. Rotate the bolt till the toggle holds the ceiling tightly.
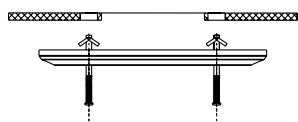

Figure 2-5 Install the In-ceiling Mount
4.Route and connect the corresponding cables.
5.Fix the camera to the in-ceiling mount with the supplied screws.
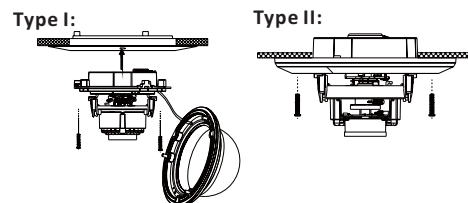

Type I: **Type II:**

Figure 2-6 Fix the Camera to the Mount
6. Repeat steps 6-8 of the Ceiling Mounting section to complete the installation.

2.3 In-ceiling Mounting with Gang Box

NOTE

Only the type 1 camera supports the in-ceiling mounting with gang box.
1.Repeat steps 2-3 of the In-ceiling Mounting section to secure the in-ceiling mount (supplied) to the gang box.
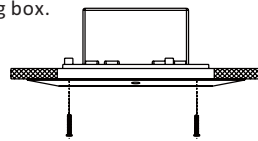

Figure 2-7 Install The Mount
2.Route and connect the corresponding cables.
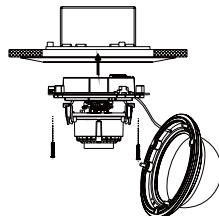3.Align the camera with the gang box, and tighten the screws to secure the camera with the gang box..

Figure 2-8 Fix the Camera to the Gang Box
4. Repeat steps 6-8 of the Ceiling Mounting section to complete the installation.
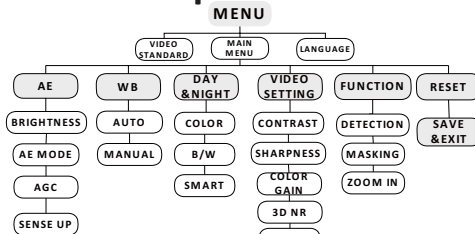
3 Menu Operation

Figure 3-1 Main Menu

NOTE

You can call the menu and adjust the camera parameters with a coaxial camera controller (purchase separately). You can also call the menu with supported TVI DVR.

3.1 AE
Move the cursor to AE, and you can adjust the image brightness by the **BRIGHTNESS**, **AE MODE**, **AGC**, and **SENS-UP** in this menu.
As shown in Figure 3-2.

BRIGHTNESS: Set the brightness value from 1 to 10 to darken or brighten the image.
AE MODE: Set AE mode as GLOBLE AE, and D-WDR.
AGC: **HIGH**, **MIDDLE**, and **LOW** can be set for the AGC level. Select OFF to disable the AGC.
SENSE UP: Set the SENSE UP value from 0 to 16.

```
         AE
1. BRIGHTNESS  1-|--10
2. AE MODE     DWDR
3. AGC         OFF
4. SENSE UP    0-|---16
5. RETURN      ↵
```
```
       MANUAL
1. R GIAN     1-|--10
2. B GAIN     1-|--10
3. RETURN     ↵
```

Figure 3-2 AE   Figure 3-3 WB-Manual

3.2 WB
Move the cursor to WB, and you can set White Balance mode as **AUTO** and **MANUAL** in this menu.
AUTO: white balance is being adjusted automatically.
MANUAL: Set the **R GAIN/B GAIN** value from 1 to 10. As shown in Figure 3-3.

3.3 DAY & NIGHT

Move the cursor to DAY & NIGHT, and select **COLOR**, **B/W**, or **SMART** as the DAY & NIGHT mode.
COLOR: The image is colored in day mode all the time.
B/W: The image is black & white all the time, and the IR LED turns on in the low-light conditions.
SMART: Select to turn on/off the INFRARED_LAMP and to set the Smart IR level from 1to 16.
As shown in Figure 3-4.

```
        SAMRT
1. INFRARED_LAMP    OFF
2. SMART IR         0-|--5
3. RETURN           ↵
```

Figure 3-4 Smart Mode of DAY&NIGHT

3.4 Video Setting

Move the cursor to the VIDEO SETTING, and press the menu button to enter the video configuration interface. As shown in Figure 3-5.

CONTRAST: Set the CONTRAST value from 1 to 10.
SHARPNESS: Set the edge and detail sharpness value from 1 to 10.
COLOR GAIN: Set the color gain from 1 to 10.
3D NR: Set the 3D NR level as **High**, **Middle**, and **Low**. Select **OFF** to disable the 3D NR.
MIRROR: Set the mirror mode as **OFF**, **H**, **V**, or **HV**.

3.5 FUNCTION

 You can set **DETECTION**, **MASKING** , **ZOOM IN** and **LANGUAGE** of the camera in this menu.

```
    VIDEO SETTING
1. CONTRAST    1-|--10
2. SHARPNESS   ↵
3. COLOR GAIN  1-|--10
4. 3D NR       OFF
5. MIRROR      OFF
6. RETURN      ↵
```
```
       FUNCTION
1. DETECTION      ↵
2. MASKING        ↵
3. ZOOM IN        50-|--100
4. LANGUAGE       ENGLISH
5. RETURN         ↵
```

Figure 3-5 Video Settings   Figure 3-6 Function

DETECTION: Set the motion sensitivity as **WEAK**, **LOW**, **MIDDLE** or **HIGH**. Select an AREA to enter the motion detection AREA menu. As shown in Figure 3-7.
AREA: Set the status as **OFF/ON**. Select a color for area border. Move the joystick up/down and right /left to set the horizon/vertical size and position. As shown in Figure 3-8.

```
      DETECTION
1. SENSITIVITY  HIGHT
2. AREA NO.0    ↵
3. AREA NO.1    ↵
4. AREA NO.2    ↵
5. AREA NO.3    ↵
6. RETURN       ↵
```
```
          AREA
1. STATUS         OFF
2. COLOR          WHITE
3. HORIZON SIZE   0
4. VERTICAL SIZE  0
5. HORIZON MOVE   0
6. VERTICAL MOVE  0
7. RETURN         ↵
```

Figure 3-7 Detection   Figure 3-8 Detection Area

MASKING: Select a masking back ground color. Select an AREA to enter the masking AREA menu. As shown in figure 3-9.
AREA: Set the status as **OFF/ON**. Move the joystick up/down and right/left to set the horizon/vertical size and position.
As shown in Figure 3-10.

```
       MASKING
1. COLOR      WHITE
2. AREA NO.0  ↵
3. AREA NO.1  ↵
4. AREA NO.2  ↵
5. AREA NO.3  ↵
6. AREA NO.4  ↵
7. AREA NO.5  ↵
8. AREA NO.6  ↵
9. AREA NO.7  ↵
10.RETURN
```
```
          AREA
1. STATUS         OFF
2. HORIZON SIZE   0
3. VERTICAL SIZE  0
4. HORIZON MOVE   0
5. VERTICAL MOVE  0
6. RETURN         ↵
```

Figure 3-9 Detection Area   Figure 3-10 Detection

ZOOM IN: The ZOOM IN value can be adjusted from 50 to 100.
LANGUAGE: Chinese and English are selectable.

3.6 Reset

Reset all the settings to the default.

3.7 Save & Exit
Move the cursor to **SAVE & RESET**, and press OK to save the settings and exit the menu.