TURBO HD D(F)7T Series Dome Camera

User Manual

User Manual

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 model DS-2CE56D(F)7T-VPIT.

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.

Privacy Notice

Surveillance laws vary by jurisdiction. Check all relevant laws in your jurisdiction before using all this product for surveillance purpose to ensure that your use of this product conforms.

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

CE 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.

2002/96/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.

Industry Canada ICES-003 Compliance

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

1 Introduction

1.1 Product Features

This series of camera adopts high performance sensor and advanced circuit board design technology. It features high resolution, low distortion, and low noise, etc. It is suitable for surveillance system and image process 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;
- IR cut filter with auto switch;
- OSD menu, parameters are configurable;
- Auto white balance and internal synchronization;
- SMART IR mode;
- True WDR;
- Advanced 3-axis design meets different installation requirements;
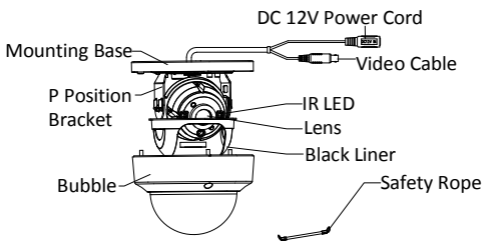
1.2 Overview

Figure 1-1 Overview of Dome Camera

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 required 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

2.1.1 Ceiling Mounting without Inclined Base

Steps:

1. Disassemble the dome camera by loosening three screw of the bubble, and then take apart the bubble, as shown in Figure 2-1.
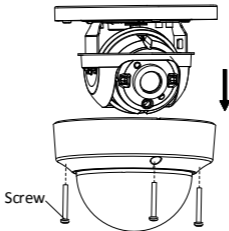

Screw

Figure 2-1 Disassemble the Camera

NOTE

- Three screws on the bubble are all drop-proof screws. You don't have to loosen them completely.
- The safety rope is hung on the bubble and the mounting base. Do not drag the camera in case of the damage.

2. Attach the drill template (supplied) to the place where you want to fix the camera, and then drill the screw holes and the cable hole in the ceiling according to the drill template.

Figure 2-2 Drill Template

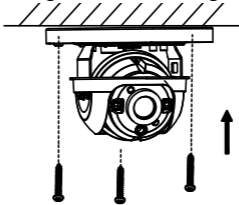3. Fix the mounting base to the ceiling with the screws.

Figure 2-3 Fix the Mounting Base and Camera

4. Route the cables through the cable hole and connect the video cables and power cord.

5. Adjust the camera according to Figure 2-4 to get an optimum angle.

   1). Rotate the camera body to adjust the pan angle [0° to 355°].

   2). Loosening the T direction screw to adjust the tilt angle [0° to 75°]. For 2.8mm lens models, the tilt angle range is [0° to 65°].

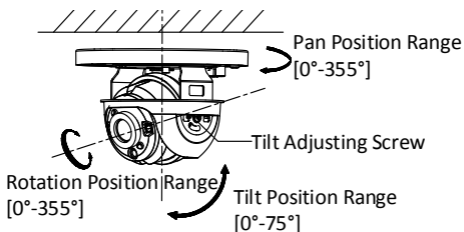   3). Rotate the camera body to adjust the rotation position angle [0° to 355°].

Pan Position Range [0°-355°]

Tilt Adjusting Screw

Rotation Position Range [0°-355°]

Tilt Position Range [0°-75°]

Figure 2-4 3-axis Adjustment

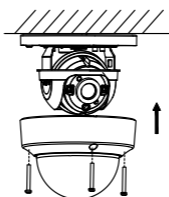6. Install the bubble to the camera and tighten three screws.

Figure 2-5 Fix the Camera to the Ceiling

2.1.2 Ceiling Mounting with Inclined Base

Steps:

7. Attach the drill template (supplied) and then drill the screw holes and the cable hole in the ceiling.

Figure 2-6 Disassemble the Camera

8. Install the inclined base to the ceiling according to the template and fix the screws to secure the base.
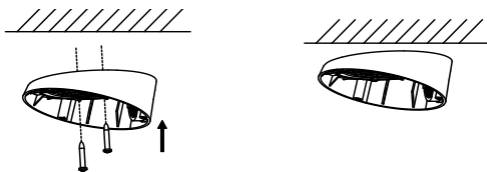

Figure 2-7 Fix the Inclined Base to the Ceiling

9. Repeat step 1-6 of *2.1.1* to install the camera to the inclined base.

2.2 Wall Mounting with Bracket

NOTE

You need to purchase a bracket/pendent cap separately if you adopt wall mounting with bracket/pendent cap.

2.2.1 Wall Mounting with Plastic Bracket

Steps:

1. Attach the drill template (supplied) and then drill the screw holes and the cable hole in the ceiling.

Figure 2-8 Drill Template

2. Install the bracket onto the wall according to the template and fix the screws to secure the bracket.
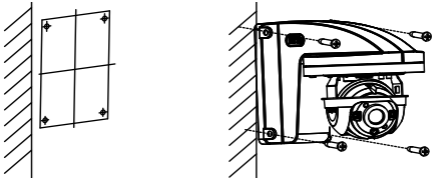

Figure 2-9 Fix the Bracket onto the Wall

3. Repeat steps 1-5 of *2.1.1* to fix the dome camera with the plastic bracket.
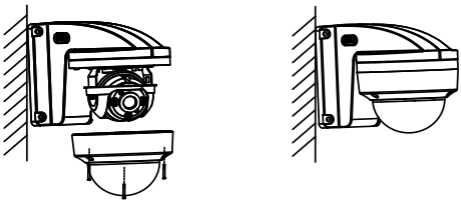4. Secure the camera to the mounting base.

Figure 2-10 Secure the Camera

2.2.2 Wall Mounting with Metallic Bracket

Steps:

1. Attach the drill template (supplied) and then drill the screw holes and the cable hole in the ceiling, as shown in Figure 2-8.
2. Install the bracket onto the wall according to the template and fix the screws to secure the bracket.
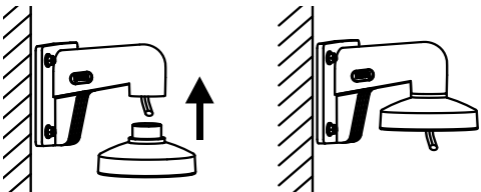3. Fix the pendent cap onto the bracket, as shown in Figure 2-11.

Figure 2-11 Fix the Pendent Cap

4. Repeat steps 1-5 of *2.1.1* to fix the dome camera with the metallic bracket.
5. Secure the camera to the mounting base.

2.2.3 Wall Mounting with Pendent Cap

Steps:

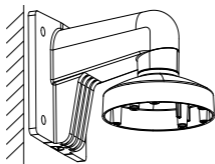1. Fix the pendent cap bracket on the wall, as shown in Figure 2-12.

Figure 2-12 Install the Pendent Cap

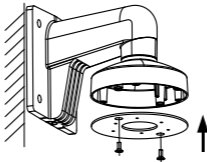2. Fix the adapter to the pendent cap with two screws. (Optional)

Figure 2-13 Install the Adapter to the Pendent Cap

3. Repeat step 1-8 of *2.1.1* to install the camera to the pendent cap.

2.3 Pendent Mounting with Pendent Bracket

Steps:

1. Fix the pendent mount bracket in the ceiling and tighten the screws, as shown in Figure 2-14.
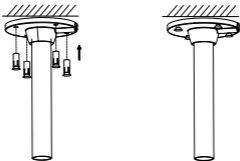

Figure 2-14 Install the Pendent Cap

2. Disassemble the dome camera by loosening three screw of the bubble, and take apart the bubble.
3. Fix the camera to the junction box by tightening screws
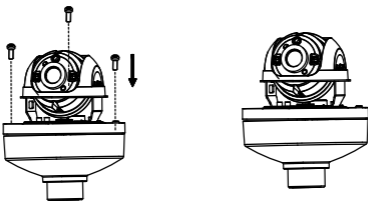

Figure 2-15 Install the Adapter to the Pendent Cap

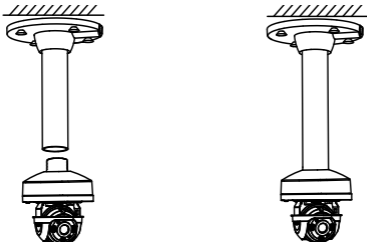4. Fix the junction box with the bracket by rotating the box, as shown in Figure 2-16.

Figure 2-16 Fix the Junction Box with Pendent Bracket

5. Repeat steps 3-5 of *2.1.1* to fix the camera with the pendent bracket and adjust the surveillance angle.
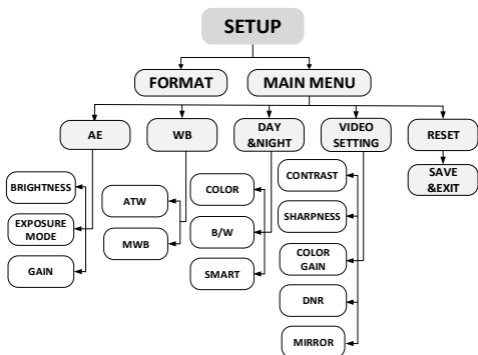
3 Menu Description

Figure 3-1 Main Menu Overview

NOTE

- With a camera controller (purchased separately) or calling the preset No. 95 of DVR you can select the menu and adjust the parameters.
- Move the cursor up/down to select the menu item.
- Move the cursor left/right to adjust the value of the selected item.
- Press the **OK** key to confirm a selection.

3.1 Format

Move the cursor to **FORMAT**, and press the menu button to enter the FORMAT sub menu. You can set the format of camera and confirm.

3.2 Main Menu

3.2.2 AE (Auto Exposure)

AE describes the brightness-related parameters. You can adjust the image brightness by the **BRIGHTNESS**, **EXPOSURE MODE**, and **GAIN** in different light conditions.
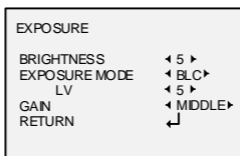

Figure 3-2 AE

BRIGHTNESS

Brightness refers to the brightness of the image. You can set the brightness value from 1 to 10 to darken or brighten the image. The higher the value is, the brighter the image is.

EXPOSURE MODE

You can set **AE** mode as **GLOBLE**, **BLC**, and **WDR**.

● **GLOBE**

GLOBE refers to the normal exposure mode which is for adjusting the situations including unusual lighting distribution, variations, non-standard processing, or other conditions of under exposure to get an optimum image.

- **BLC (Backlight Compensation)**

BLC (Backlight Compensation) compensate light to the object in the front to make it clear, but this causes the over-exposure of the background where the light is strong.

When BLC is selected as the exposure mode, the BLC level can be adjusted from 0 to 8.

- **WDR (Wide Dynamic Range)**

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. WDR balances the brightness level of the whole image and provide clear images with details.

GAIN

It optimizes the clarity of image in poor light scene. The **GAIN** level can be set to **HIGH**, **MIDDLE**, and **LOW**. Select **OFF** to disable the **GAIN** function.

NOTE

The noise will be amplified if the **GAIN** is on.

3.2.3 WB (White Balance)

White balance is the white rendition function of the camera to adjust the color temperature according to the environment. It can remove the unrealistic color casts in the image. You can set WB mode as **ATW**, and **MWB**.

ATW

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

MWB

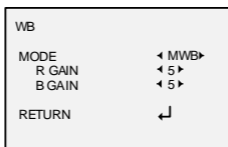You can set the **R GAIN**/**B GAIN** value from 0 to 255 to adjust the shades of red/blue color of the image.

```
WB

MODE        ◄ MWB ►
  R GAIN    ◄ 5 ►
  B GAIN    ◄ 5 ►

RETURN      ↵
```

Figure 3-3 MWB Mode

3.2.4 DAY-NIGHT

Color, **B/W**, and **SMART** are selectable for DAY and NIGHT switches.

COLOR

The image is colored in day mode all the time.

B/W

The image is black and white all the time, and the IR LED turns on in the low-light conditions.

SMART

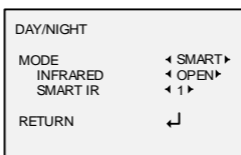You can select to turn on/off the **INFRARED** and set the value of SMART IR in this menu.

```
DAY/NIGHT

MODE          ◄ SMART ►
  INFRARED    ◄ OPEN ►
  SMART IR    ◄ 1 ►

RETURN        ↵
```

Figure 3-4 Day & Night

- **INFRARED**

You can select to turn on/off the IR LED to response to the requirements of different circumstances.

- **SMART IR**

The **Smart IR** function is used to adjust the light to its most suitable intensity, and to prevent the image from over exposure. The **SMART IR** value can be adjusted from 0 to 3. The higher the value is, the more obvious effects are, and it is disabled when the value is 0.

3.2.5 VIDEO SETTING

Move the cursor to **VIDEO SETTING** and press the confirm button to enter the submenu. **CONTRAST**, **SHARPNESS**, **COLOR GAIN**, **DNR** and **MIRROR** are adjustable.
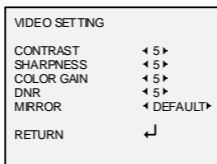
```
VIDEO SETTING

CONTRAST        ◄ 5 ►
SHARPNESS       ◄ 5 ►
COLOR GAIN      ◄ 5 ►
DNR             ◄ 5 ►
MIRROR          ◄ DEFAULT ►

RETURN          ↵
```

Figure 3-5 Video Setting

CONTRAST

This feature enhances the difference in color and light between parts of an image. You can set the **CONTRAST** value from 1 to 10.

SHARPNESS

Sharpness determines the amount of detail an imaging system can reproduce. You can set the **SHARPNESS** value from 1 to 10.

COLOR GAIN

Adjust this feature to change the saturation of the color. The value ranges from 1 to 10.

DNR (Digital Noise Reduction)

The DNR function can decrease the noise effect, especially when capturing moving images in low light conditions and delivering more accurate and sharp image quality.

You can set the **DNR** value from 1 to 10.

MIRROR

DEFAULT, **H**, **V**, and **HV** are selectable for mirror.

DEFAULT: The mirror function is disabled.

H: The image flips 180 degree horizontally.

V: The image flips 180 degree vertically.

HV: The image flips 180 degrees both horizontally and vertically.

3.2.6 RESET

Reset all the settings to the default.

3.2.7 SAVE &EXIT

Move the cursor to SAVE &EXIT and press OK to save the setting and exit the menu.