HIKVISION

IR Bullet Camera

User Manual

UD.6L0201D0089A01

www.hikvision.com

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

Type	Model
I	DS-2CC1282P(N)-IT3 DS-2CC12A2P(N)-IT3
II	DS-2CC1282P(N)-IT5 DS-2CC12A2P(N)-IT5

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.

DISCLAIMER STATEMENT

"Underwriters Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL's Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.

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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.

Table of Contents

1 Introduction

1.1 Product Features

This series of camera adopts a new generation sensor with high sensitivity and advanced circuit design technology. It features high resolution, low image distortion and low noise, etc., which makes it suitable for surveillance system and image processing system.

- High-performance sensor and high resolution bring high-quality image
- IR LED enables the day/night surveillance
- Day/Night auto switch
- ATW, which brings high color rendition
- Auto electronic shutter control to adapt to the different surveillance environments
- Auto gain control, adaptive brightness
- High SNR brings high-quality image
- Ingress protection: IP66

1.2 Overview

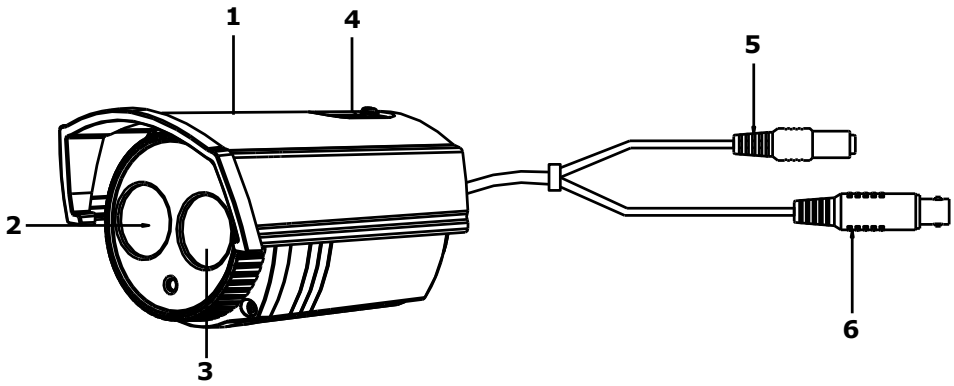

Figure 1-1 Overview of Type I Bullet Camera

Table 1-1 Description

No.	Description	No.	Description
1	Sun Shield	4	Adjustable Screw
2	Lens	5	Power Cable
3	IR LED	6	Video Cable

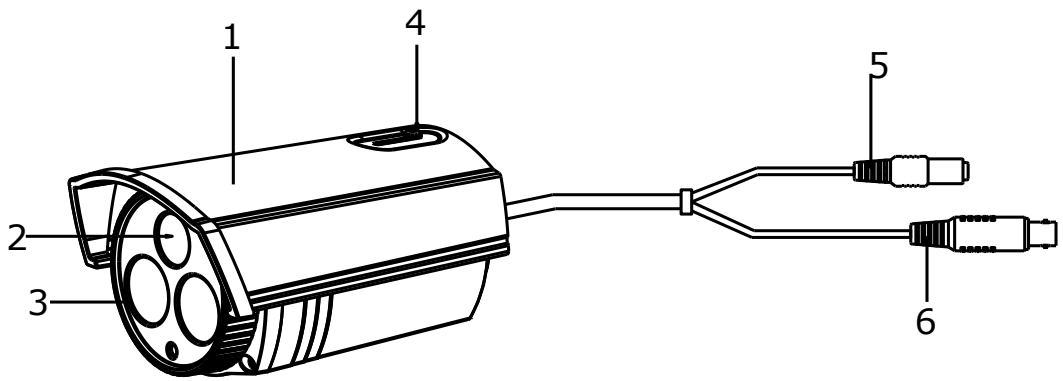

Figure 1-2 Overview of Type Ⅱ Bullet Camera

Table 1-2 Description

No.	Description	No.	Description
1	Sun Shield	4	Adjustable Screw
2	Lens	5	Power Cable
3	IR LED	6	Video Cable

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 AC outlet to avoid damage.
- 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 Wall Mounting

IR bullet camera is widely used in the low luminance indoor environment, and wall mounting is recommended. We will take the wall mounting as an example to explain the installation steps.

***Note**:* Please make sure that the wall is strong enough to withstand 3 times the weight of the camera and the bracket.

Steps:

1. **Adjust the Sun Shield**

Push the sun shield to the outermost position and tighten the adjustable screw.

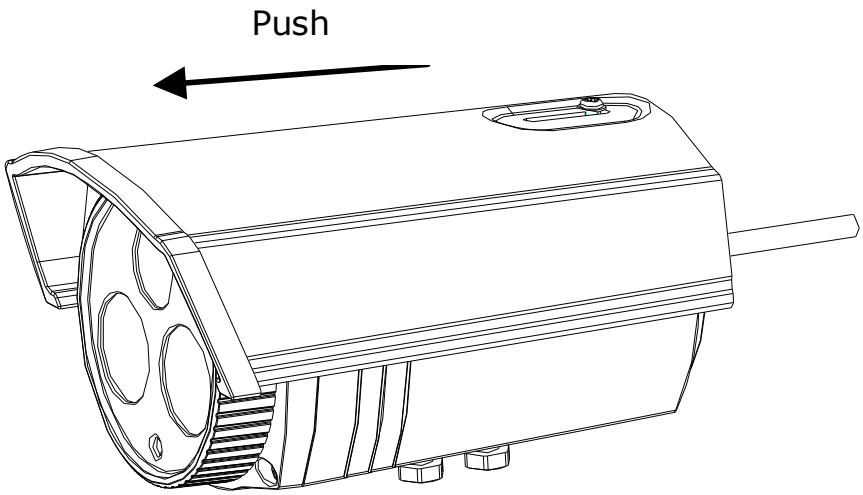

Figure 2-1 Adjust the Sun Shield

2. Secure the Mount

Secure the wall mount to the wall with the screws.

Notes:

- The wall mount you select should be at least 1.5 times longer than the bullet camera.
- If the wall is the cement wall, you need to insert the expansion screws before you install the wall mount. If the wall is the wooden wall, you can use self-tapping screw to secure the wall mount.

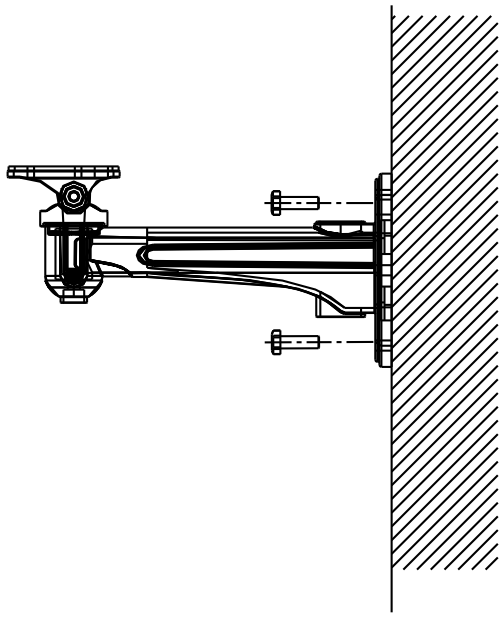

Figure 2-2 Secure the Wall Mount

3. Install the Camera

Secure the camera to the wall mount with the screws.

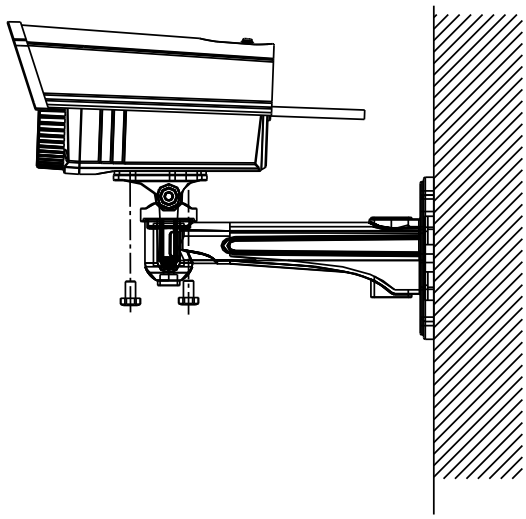

Figure 2-3 Install the Camera

2.2 Wiring

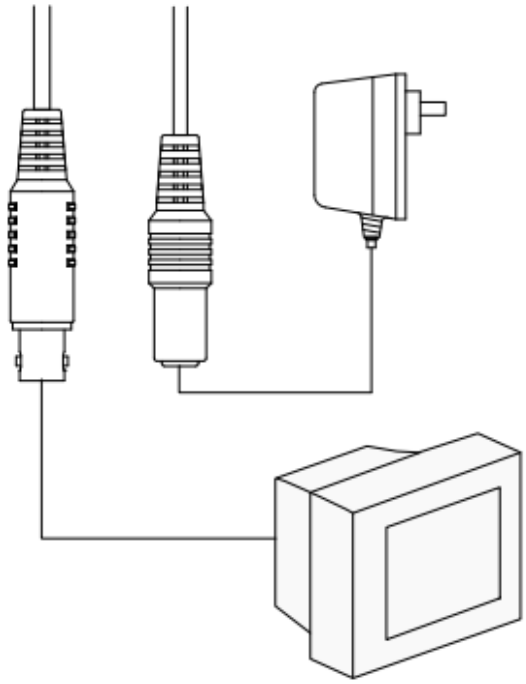

Figure 2-4 The Power Cable and the Video Cable

Note: Please make sure that the power adapter is compatible with the camera, and the standard power supply is 12V DC. Please refer to the technical specification for more information.

Appendix

1 Glossary

Note:

The glossary gives brief explanations to the basic operation principle or the basic function of the camera. However, it doesn't mean the listed functions are all supported by the camera mentioned in this user manual. Please take the function in the corresponding specification as the standard.

Definition:

Definition is the degree to distinguish the edge between two parts.

Contrast:

Contrast is the color difference between the brightest and darkest parts.

Saturation:

Saturation is the degree of color purity. The color is purer, the image is brighter.

DAY/NIGHT Auto Switch:

The cameras deliver color images during the day. And as light diminishes at night, the cameras switch to night mode and deliver black and white images with high quality.

AGC:

AGC is a control circuit that automatically changes the gain of a receiver or other pieces of equipment, so that the desired output

signal remains essentially. When under low illumination, AGC will regulate the gain and amplification of the video signal.

S/N ratio:

It is the ratio of Signal voltage to noise voltage. The ratio is larger, the effect of noise is less, and the image is clearer.

White Balance:

White balance can remove the unrealistic color casts. White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically.

BLC:

If you focus on an object against strong backlight, the object will be too dark to be seen clearly. The BLC (Backlight Compensation) function can 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.

SMART IR:

The SMART IR adopts the smart image processing technique to automatically adjust the brightness curve by detecting multi-zone brightness, and so as to prevent the over exposure of central point existed in short IR distance conditions.

Motion Detection:

In the user-defined motion detection surveillance area, the moving object can be detected and trigger alarm. The sensitive level can be customized according to the environment.

Privacy Mask:

This function allows you to block or mask certain area of a scene, thus prevent the personal privacy from recording or live viewing.

OSD (On Screen Display):

OSD is the texts superimposed on a screen. It can show the menu on the screen.

Synchronous System:

There are two modes for the camera synchronization. Internal synchronization is realized by the synchronous signal which is generated by the inside crystal oscillator.

ICR Auto Switch:

The filter will filter infrared light during the daytime and change to normal filter at night to ensure a high sensitivity and clear image.

WDR (Wide Dynamic Range):

The wide dynamic range (WDR) 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.

EIS (Electronic Image Stabilization):

Electronic image stabilization function can reduce certain ranges of vibration which is caused by the external environment.

3D Digital Noise Reduction:

Comparing with the general 2D digital noise reduction, the 3D digital noise reduction function processes the noise initiated by CCD besides processing the noise in the separated Y video signal and C video signal.

HLC (Highlight Compensation):

The HLC is capable of detecting and reversing the bright spots in the picture (such as headlights) to black so as to achieve optimum picture quality.

Digital Zoom:

Digital zoom helps to crop the entire image, and then digitally enlarge the size of a portion of image that is needed to zoom in on.

2 Troubleshooting

Problem 1:

Why does the camera restart intermittently? And the problem is much more serious when infrared lights of IR camera are turned on at night.

Possible Reasons:

The main and common reason is power supply shortage. This problem may happen to the IR camera especially at night, because the infrared lights are turned on at night and increase the power consumption.

To Solve the Problem:

You need to ensure that the power supply matches with ±10% of the nominal voltage. And the power consumption of power adapter should meet the demand of the camera.

Problem 2:

The camera can never be focused by adjusting the focus-stick on the lens. And there is also no use adjusting the back focus.

Possible Reasons:

The camera needs the lens with CS lens mount. When you install a lens with C lens mount, the camera will never focus.

To Solve the Problem:

You can change a lens with CS lens mount to the camera.

Or you can use a C/CS adapter ring between the camera and the lens with C lens mount.

Problem 3:

The camera is installed with an auto-iris lens. You adjust the focus to get a clear image in the daytime. But the image is defocused at night.

Possible Reasons:

In the daytime, the illumination is high, so the iris is adjusted to a small size automatically. The DOF (depth of field) is long. But at night, the iris is adjusted to a large size automatically, so the DOF is shortened. The focus you adjusted in the daytime now locates out of the DOF, so the image is defocused at night.

To Solve the Problem:

When you adjust the focus for a camera with an auto-iris lens, you need to set the lens type to AES (auto electronic shutter) mode. Under AES mode, the iris is adjusted to the largest size automatically. Then you can adjust the focus to get a clear image. At last, you need to set the lens type back to AI (auto iris) mode.

Or you can adjust the focus in low illumination condition, such as at night.

Problem 4:

A camera with OSD menu and an auto-iris lens displays black video. But the OSD menu can be called and displayed.

Possible Reasons:

Auto-iris lens connector is loose contact.

Or the iris driven mode of the camera does not match with the mode of auto-iris lens.

To Solve the Problem:

Check the auto-iris lens connector to ensure good contact.

Set the iris driven mode of the camera the same as that of lens. The modes can be VD (video drive) or DD (direct drive). DD mode is commonly used.

3 Technical Maintenances

Lens Maintenance

The lens surface is plated an anti-reflection coating. The dust, oil and finger print, etc. will cause scratch, mildewed and performance degraded. Please refer to the following method to clean the lens.

- Handling dust

Use oil free soft brush or blowing dust ball to clean the dust.

- Handling oil

Steps:

1. Wipe off the water-drop or oil by soft cloth and dry the lens.
2. Use oil free cotton cloth or lens clean paper to wipe the lens from center to outside with alcohol or detergent.
3. Change the cloth to wipe the lens until the lens is clean.

Bubble Maintenance of Domes

The bubble is of transparent plastic. The dust, oil and finger print, etc. will cause scratch or image blur. Please refer to the following method to clean the bubble.

- Handling dust

Use oil free soft brush or blowing dust ball to clean the dust.

- Handling oil

Steps:

1. Wipe off the water-drop or oil by soft cloth and dry the bubble.
2. Use oil free cotton cloth or bubble clean paper to wipe the bubble from center to outside with alcohol or detergent.

3. Change the cloth to wipe the bubble until the bubble is clean.

Glass Maintenance of IR Camera

Steps:

1. Wipe off the dust, water-drop or oil by soft cloth and dry the glass.
2. Use oil free cotton cloth or glass clean paper to wipe the glass from center to outside with alcohol or detergent.
3. Change the cloth to wipe the glass until the glass is clean.

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