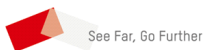




# Vehicle-Mounted Camera

## 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 Vehicle-Mounted Camera.

This manual may contain several technically incorrect places or printing errors. The content is subject to change without notice, and 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 2014/35/EC, the EMC Directive 2014/30/EC.



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).



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](http://www.recyclethis.info).

### Industry Canada ICES-003 Compliance

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



## 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.
- Refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with AC 24V or DC 12V according to the IEC60950-1 standard. Refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Make sure that the plug is firmly connected to the power socket.
- When the product is mounted on wall or ceiling, the device shall be firmly fixed.

- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- If the product does not work properly, contact your dealer or the nearest service center. Never attempt to disassemble the camera by yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)






### Cautions

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period, replace the lens cap to protect the sensor from dirt.
- Do not aim the camera at the sun or extra bright places. Blooming or smearing may occur otherwise (which is not a malfunction), and affect the endurance of sensor at the same time.
- 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 place the camera in extremely hot, cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for operating environment.
- Keep the camera away from liquid while in use.
- While in delivery, the camera shall be packed in its original packing, or packing of the same texture.

### Symbol Conventions

The symbols that may be found in this document are defined as follows.

| Symbol   | Description   |
|--|---|
|  NOTE    | Provides additional information to emphasize or supplement important points of the main text.   |
|  WARNING | Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results. |
|  DANGER  | Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.   |

# 1 Introduction

## 1.1 Product Features

This series of camera adopts 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.

The main features are as follows:

- High performance CMOS sensor and high resolution bring high-quality image.
- Low illumination.
- Support IR LED.
- Support auto white balance, auto gain control, unit transmission control.
- Advanced 3-axis design meets different installation requirements.
- Support audio function (depending on models).

## 1.2 Overview

### 1.2.1 Overview of Vehicle-Mounted Camera

The overview of the camera is shown below.

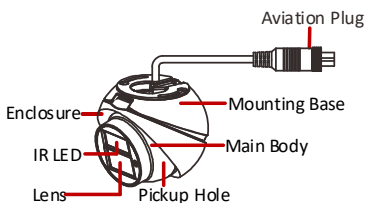


Figure 1-1 Overview

#### NOTE

The camera with sound pickup function has a pickup hole on the main body, shown in Figure 1-1 and this series camera can only be used in the indoor facility. For the camera without this function, it can be used in the outdoor facility.

### 1.2.2 Interfaces of Aviation Plug

The interfaces of aviation plug are shown below.

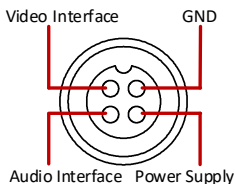


Figure 1-2 Interfaces of Aviation Plug

## 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 four 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

The installation steps of ceiling mounting are shown as follows.

Step 1 Drill the screw holes according to the drill template with  $\Phi 5.5\text{mm}$  electric drill.

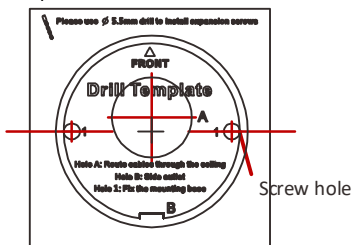


Figure 2-1 The Drill Template

Step 2 Loosen the adjusting screw of the main body with the allen wrench.

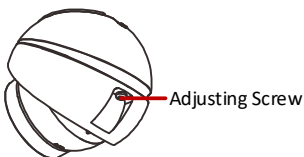


Figure 2-2 Loosen the Adjusting Screw

Step 3 Open the enclosure to take out the camera.

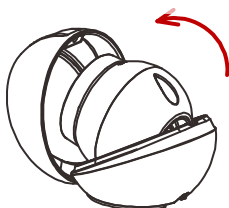


Figure 2-3 Take Out the Camera

Step 4 Take 2 PA3X25 screws from the screw package and insert 2/3 of it into the expansion screws.

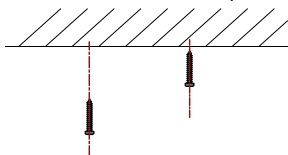


Figure 2-4 Insert the Screws

Step 5 Align the holes of the mounting base to the PA3X25 screws.

Step 6 Rotate the base to its appropriate position.

Step 7 Tighten the PA3X25 screws.

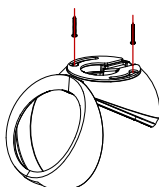


Figure 2-5 Tighten the Screws

Step 8 Insert the main body of camera and insert the adjusting screws for 2~3 threads with allen wrench to make sure the main body doesn't fall off.

Step 9 Adjust the main body to the appropriate position and tighten the adjusting screws.

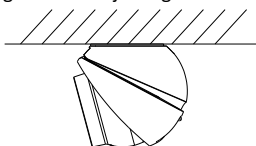
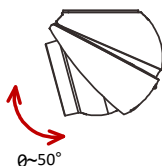


Figure 2-6 Fix the Camera

Step 10 Adjust the camera according to the figure below to get an optimum angle.



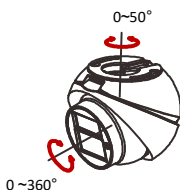


Figure 2-7 3-axis Adjustment

## 3 PTZ Control

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The PTZ function is only supported in vehicle mounted TVI dome camera, you can realize the control of IR LED and mirror mode by calling presets.

### 3.1 IR LED Control

- Enable IR LED  
You can enable IR LED by calling preset No. 130.
- Disable IR LED  
You can disable IR LED by calling preset No. 131.

### 3.2 Mirror Mode

- Disable Mirror Mode  
You can disable mirror mode by calling preset No. 140.
- Flip the Image Vertical  
You can flip the image vertical by calling preset No. 141.
- Flip the Image Horizontal  
You can flip the image horizontal by calling preset No. 142.
- Flip the Image Vertical and Horizontal  
You can flip the image vertical and horizontal by calling preset No. 143.