



## **PSM05**

### 1080P Intelligent Pedestrian Detection Camera

Please read this manual thoroughly before operating the device, and keep it for future reference.

V1.0

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# 1. Precautions

## 1.1 Storage and Keeping

- 1) Storage temperature:  $-30\sim+80^{\circ}\text{C}$ , operating temperature:  $-20\sim+70^{\circ}\text{C}$
- 2) Avoid dropping or striking this device
- 3) Never puncture, scratch or use abrasive cleaning materials on this device.
- 4) Do not place cables where they may be pinched or stepped on

## 1.2 Operating Precautions

- 1) Working voltage: 10-32V. It stops working below 7V and power supply of improper voltage may cause the device damaged permanently
- 2) Make sure all cables are connected properly. Observe polarity. Improper cable connections may damage the device. Remove the power cable connections when you don't intend to use the unit
- 3) This product is a safe driving auxiliary equipment, not a substitution for driver's any operating actions in the process of vehicle driving. Also, it cannot guarantee a 100% recognition rate
- 4) No obstacles are allowed within the end of lens, which has an impact on the product use
- 5) After the installed device is manually adjusted again, it needs to be recalibrated to show the normal detection effect



### Warning!

1. High voltage is present within the device. The opening of the case should be by professionals.
2. Do not rely too much on this device while driving





### Special Notice

Never try to repair this device by yourself. In case of any problems, please turn off the device at once and notify our company or authorized dealer. The device is a complex device. Any disassembly or modification may lead to damage and void the warrantee.

## 1.3 Maintenance

- 1) Remove all the cable connections from the device before cleaning the device.
- 2) Use a mild household detergent and clean the unit with a slightly damp, soft cloth.
- 3) Never use strong solvents such as thinner, as they might damage the finish of the device.

	Caution	
	Risk of electric shock Do not open	
<p>Caution: to reduce the risk of electric shock, Do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.</p>		



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



This symbol is intended to alert the user not to dispose of electrical and electronic equipment.

### **CAUTION**

You are cautioned that any changes or modifications not expressly approved in this manual could void your warranty and necessitate expensive repairs.

## 2. Product Features



Large Angle horizontal camera

### 2.1 Pedestrian Detection Module

- 1) Pedestrians can be detected in the detection zone (region of interest), and alarm will go off.
- 2) The closer the pedestrian is to the vehicle, the more rapid the alarm sounds.
- 3) Ai Camera has 3 alarm Zones. Each Zone can be modified or disable from Camera setting using Wi-Fi Calibration tool.

### 2.2 Artificial Intelligence Algorithm Blessing

- 1) The pedestrian detection and identification camera adopt deep learning technology, which can realize intelligent and high-precision pedestrian detection.
- 2) Deep learning (DL) + Machine Learning (ML) + Artificial intelligence (AI)




### 2.3 External Wi-Fi Communication

The mobile phone can connect with the device through the external Wi-Fi module, calibrate and set the device.

### 3. Technical Specifications

Parameter	Vertical side-view camera	Small Angle horizontal camera	Large Angle horizontal camera
Focal Length/ Viewing Angle(H)	6mm/52°	6mm/52°	2.3mm/140°
Detection distance(m)	0.5~20	0.5~20	0.5~12
Dimension(mm)	97.5×67.3×66.5	97.5×75.3×72	97.5×75.3×72
Weight(g)	355	470	470
Resolution / Frame	HD 1920 x1080 / 25 fps or 1920 x1080/30 fps		
Video Output	AHD(1.0Vp-p,75Ohm)		
Audio Output	Warning acoustical signal Output		
Audio input	Built-in Microphone		
Communication Interface	USB 2.0(For Software upgrading and camera settings)		
Input Power	DC 10~32V		
Power Dissipation (12V IN)	170mA		
Wire Length	0.5m		
Operation Temperature	-20~70°C		
Storage Temperature	-30~80°C		
Waterproof rating	IP69K		
Shell Colour	Black		

## 4. Components and Accessories

Components or Accessories	Quantity (piece)	Description
	1	Pedestrian Detection Camera
	1	Power wire (8 Pin threaded mouse male connector to 4 Pin aviation female connector and Alarm signal)
	1	Hexagon wrench (for camera Angle adjustment)



### Special Notice

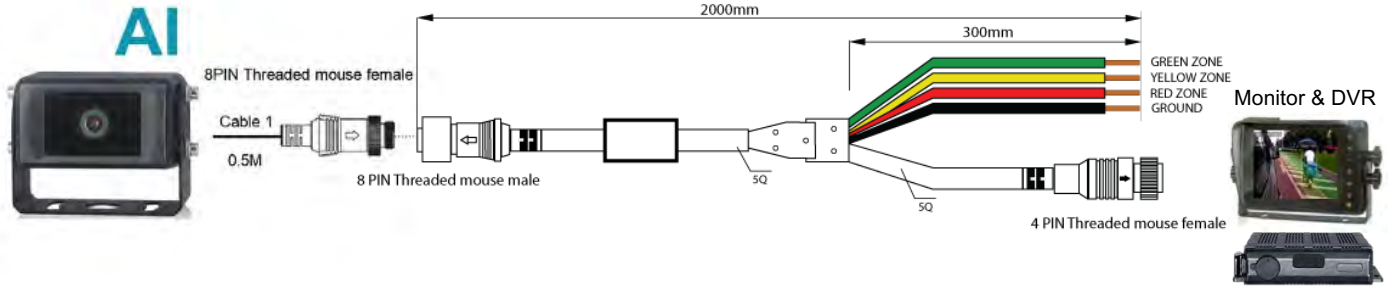
The camera diagram is shown with a Vertical side-view camera as an example. Accessory supply may be different for different application. Multiple devices can share one Wi-Fi module.

# 5. System Connection

## 1) Operation connection

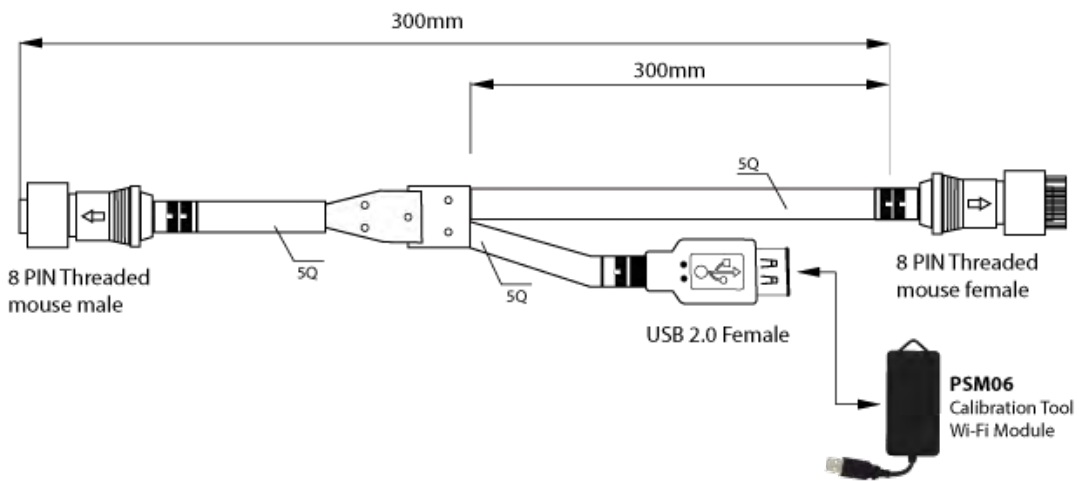
The device can be directly powered by the monitor or DVR and live video.

Power cable (8 Pin threaded mouse male connector to 4 Pin aviation female connector and Alarm zone wires).

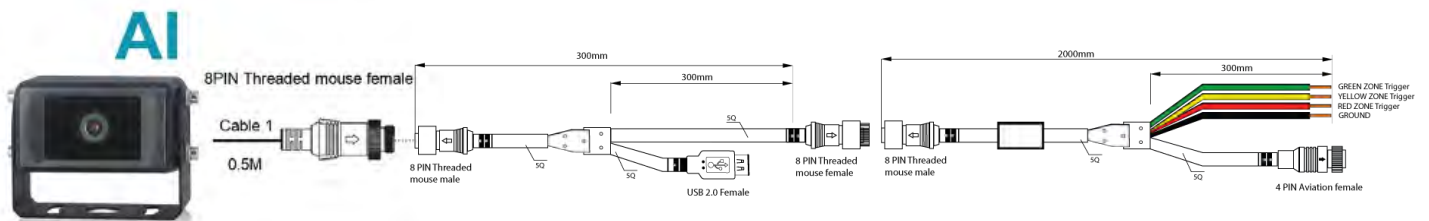


## 2) Calibration and Software Update Connection

Settings cable (8 Pin threaded mouse male connector to 8 Pin threaded mouse female connector and USB female connector).



Settings Cable can be connected between AI Camera and Power Cable. 4 Pin aviation female connector must be connected to power from DVR or Monitor to access setting mode or software update.





## 6. Installation

Move the camera to the position of the vehicle, and then install the camera after the display can show the field of view required by the driver (the supporting base of the camera has strong adhesion to magnetic materials, so it can be installed successfully by fitting the base to the vehicle. The camera installation height is recommended to be within the range of 1.0-1.6m).

The horizontal viewing Angle of the Large Angle horizontal camera is  $140^\circ$ , and the detection distance is up to 15 meters, as shown.



With one Camera



With four Cameras

# 7. Calibration

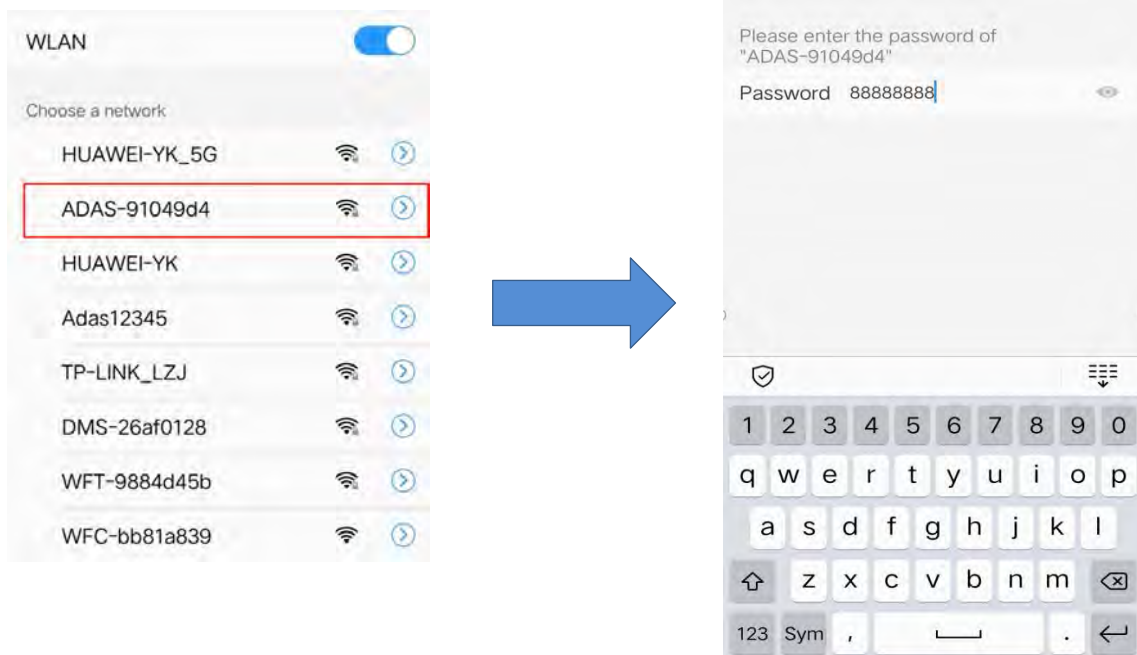
Note: The Wi-Fi name and version number displayed in blue font after booting are in the lower left area of the screen.

After about 10 seconds, the version number of the blue font disappears, while the Wi-Fi name of the blue font stays on when it turns green.

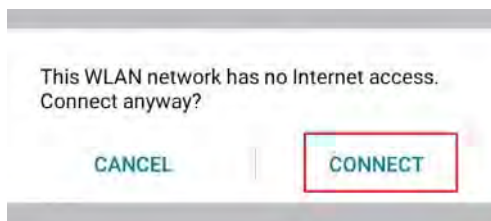
If no Wi-Fi module is connected, the green Wi-Fi SSID will also disappear.

## 7.1 Wi-Fi Connection

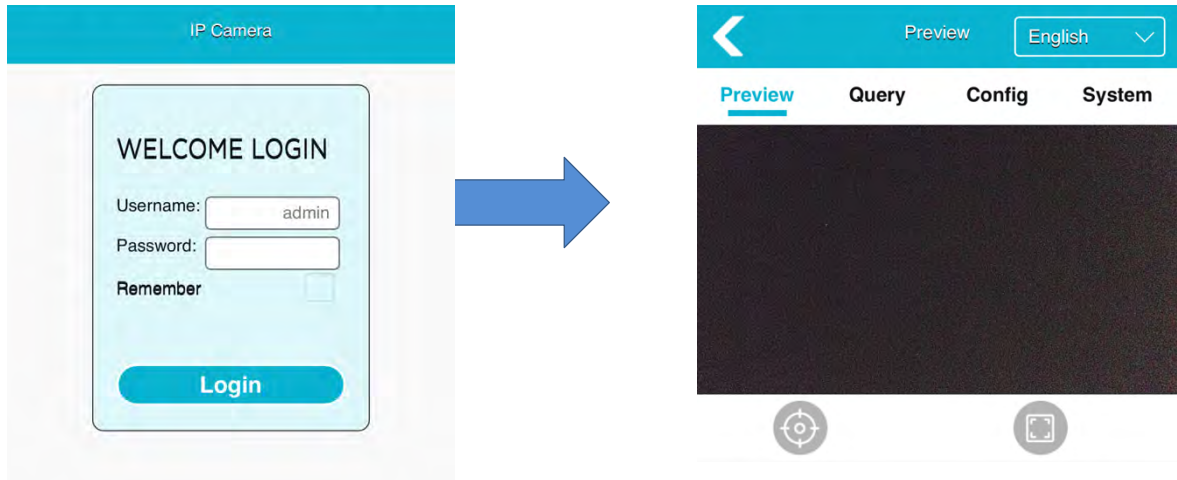
- 1) Find the Wi-Fi SSID corresponding to the device through the mobile phone (confirm that the Wi-Fi module has been connected and see the green Wi-Fi SSID in the lower left corner of the monitor), then connect, and the initial password of Wi-Fi is "88888888".



- 2) If it is first time to connect the Wi-Fi hot spot. It may prompt the message as follows, choose the "connect" button to remain the valid connection.



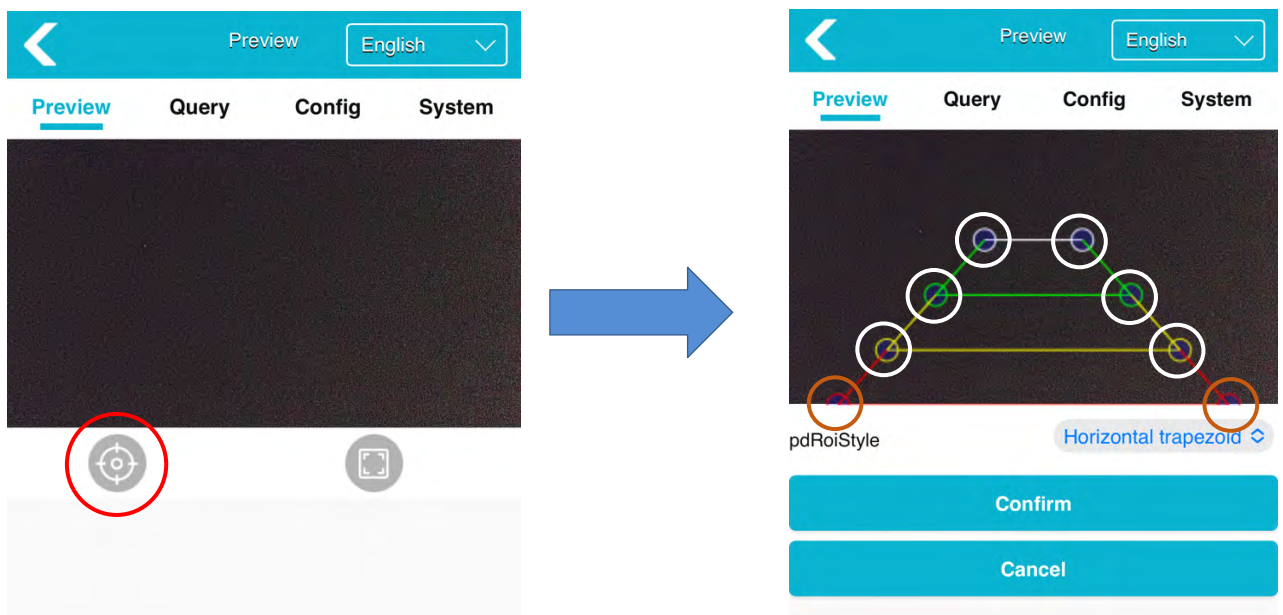
- 3) Enter the URL: 192.168.60.1:8080 in the web browser. The browser will open the welcome login screen (Default username: admin , Password: leave it blank). Click on Login to enter the menu as follows . And the effective communication distance of Wi-Fi is about 7m, please keep in this range.



After finishing Wi-Fi connection, we can calibrate the pedestrian detection alarm system or operate some other settings about the device according to web page.

## 7.2 Operations of Detection Zone Calibrating

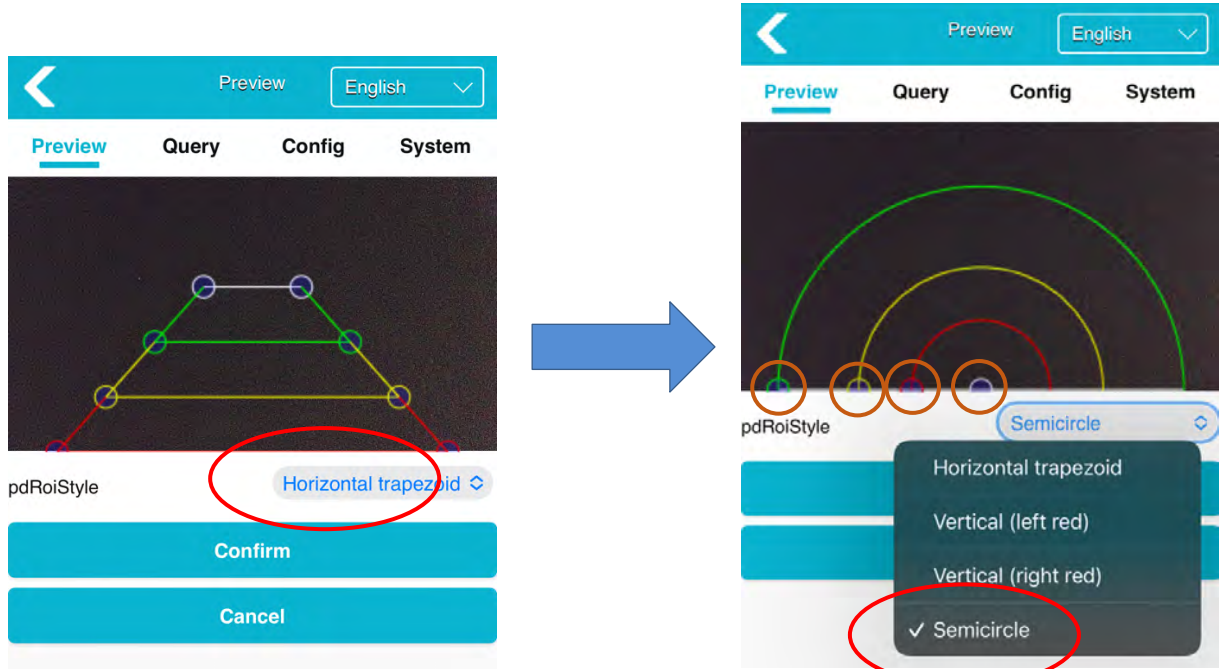
- 1) Zone Area Calibration



When you adjust to the required "Detection zone", click the " OK "button to calibrate it. The calibration will take effect immediately and the detection Zone on the monitor will also be updated immediately.

## 2) Style Coverage

There are 4 styles to choose from: Horizontal trapezoid, Vertical (Left Red), Vertical (Right red), Semicircle.



## 8. Pedestrian Detection Functions

After the device power up or reboot, real-time video will appear on the display automatically. Then, the device will enter and keep in pedestrian detection mode. To make sure the normal operation of the system, please install and calibrate the pedestrian detection alarm system carefully according to the guide of Charter 6 and Charter 7.

Function description: When pedestrians appear in detection zone, the display will frame them with the corresponding color, and a "ding" alarm with different urgency will be issued. The alarm continues until pedestrians leave the detection zone area

Note: The Vertical side-view camera and horizontal camera have the same function. The following is the difference in the graphical way.

### 1) Red Zone Alarm

When the pedestrian is detected and the red box is generated, it means that the pedestrian enters the red detection zone area. The output alarm sound is "Ding Ding Ding", and the alarm sound frequency is relatively short. Red, yellow, and green zone wires will be triggered.



## 2) Yellow Zone Alarm

When the pedestrian is detected and the yellow box is generated, the output alarm sound is "ding ding". The alarm sound frequency is moderate. Yellow and green zone wires will be triggered.



## 3) Green Zone Alarm

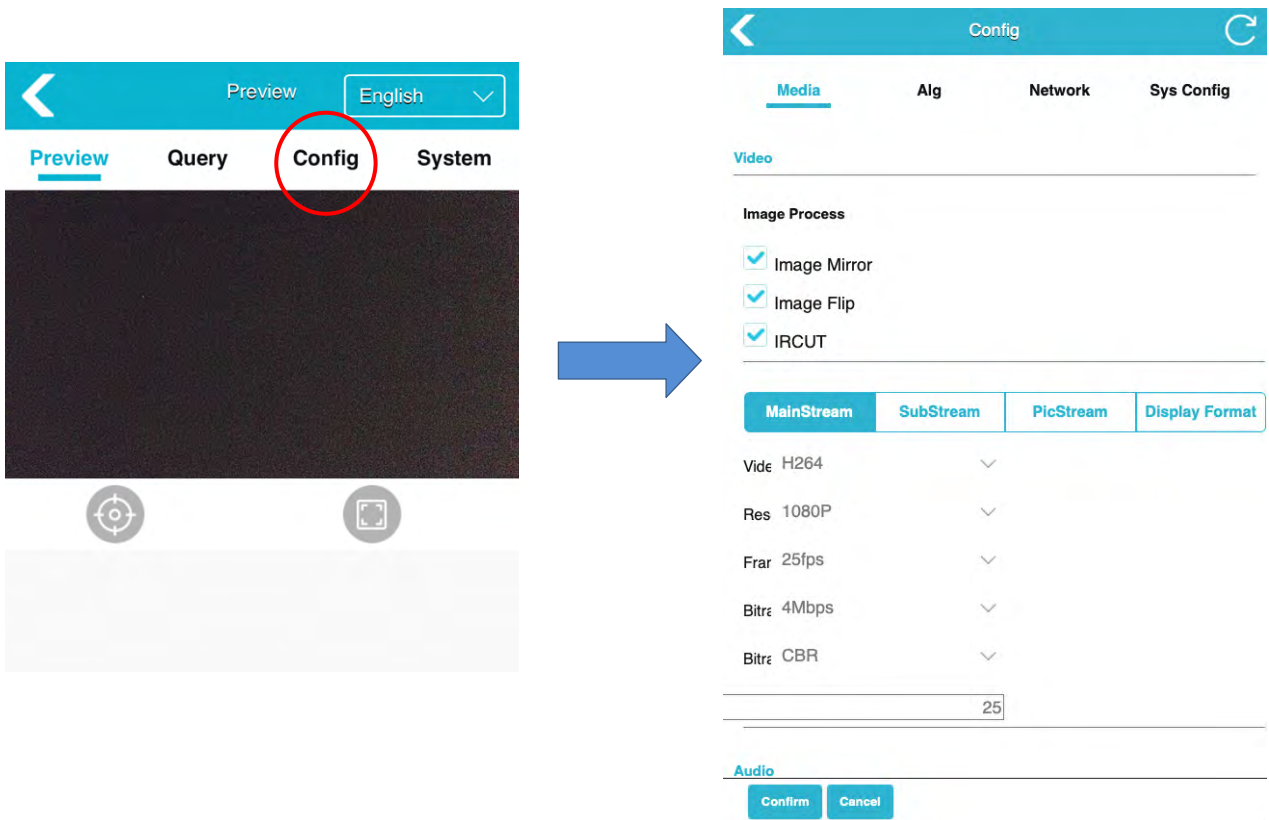
When the pedestrian is detected and the green box is generated, the output alarm sound is "ding", and the alarm sound frequency is flat. Green zone wires will be triggered.



# 9. Functions of the Web Page & System Upgrade

## 9.1 System Setting

Press the “Setting” button to enter the configuration menu as follows.



### 1) Media

- Image View
- Stream Quality
- Enable or disable built-in microphone
- Stream Options

### 2) Alg

- Change Pedestrian sensitivity
- Confidence Display
- Modify the time to send the trigger signal
- Disable or enable Zone and triggers

3) Other settings:

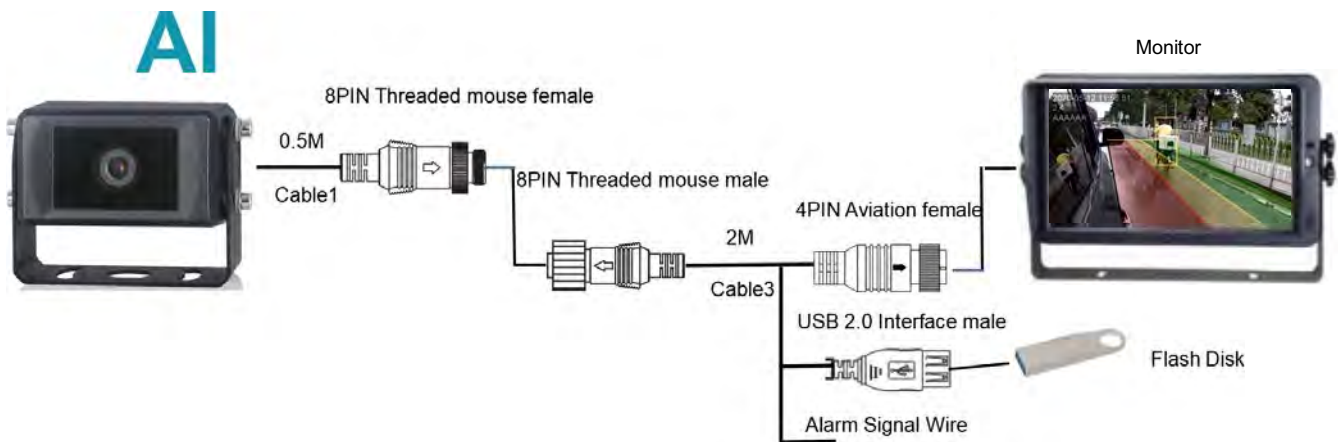
Overlay Display	Turn on or turn off the elements overlaying in the real-time video of the monitor.
Flip input	Turn on or turn off image rollover.
Mirror input	Turn on or turn off image mirroring.
Restore factory settings	All setting parameters are restored to the default value.
Sensitivity of detection	Set the level of detection sensitivity.
Audio type	Switch the type of alarm sound.
Alarming interval	Set the minimum interval between two alarms, during which no alarms are raised.
Volume	Turn up or turn down the warning voice.
Camera parameters	To set the frame rate of output AHD, 25fps or 30fps.Restart the effective
Version Info	Check the current software version of the device.
Change WI-FI Password	Change the Wi-Fi password.
Export calibration file	Export calibration file. For batch calibration.
Import calibration file	Import calibration file.



## 9.2 System Upgrade

The device can be upgraded with a flash disk. Specific methods:

- (1) Format the flash disk as Fat32 file system
- (2) Place the upgrade package named "updatepacket-ADAXX-XXXXXXXXXXXXXXXXXX" on the flash disk, then connect the flash disk to the device, restart the camera and start the upgrade, and wait for a few minutes to complete the upgrade.
- (3) After the upgrade, the software version number of the device will also change synchronously. Check the version number in the lower left corner of the monitor when the device is turned on. Or view the Version number in the "Version Info" setting on the web page



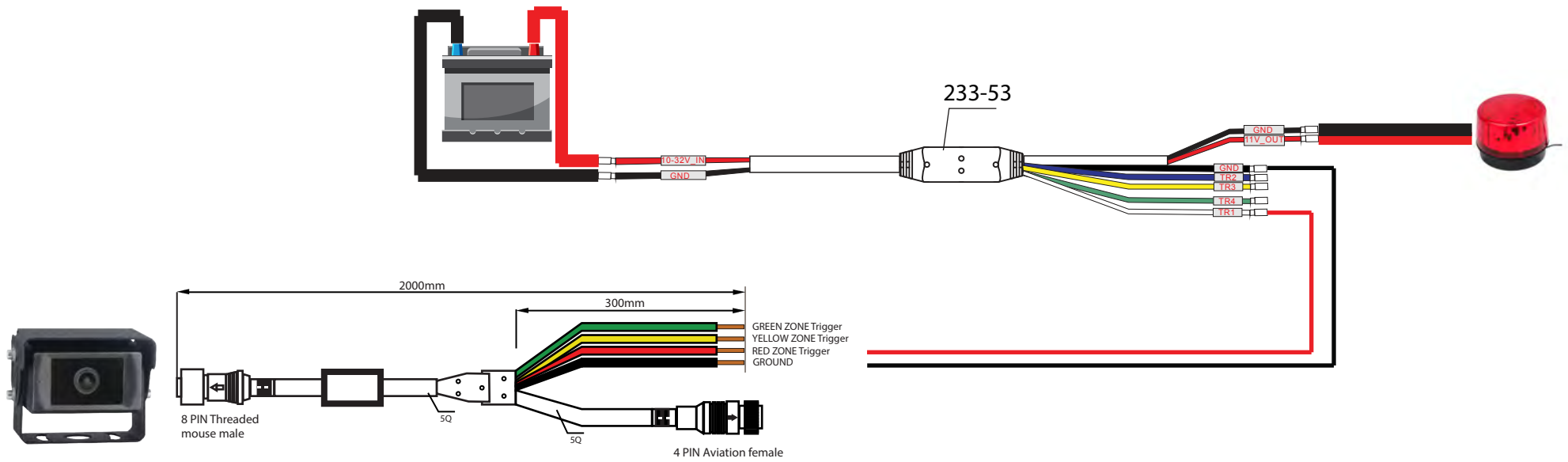
## 10. Troubleshooting

The symptoms described below do not necessarily mean a failure within the display. Please check the following items before you initiate request for repair.

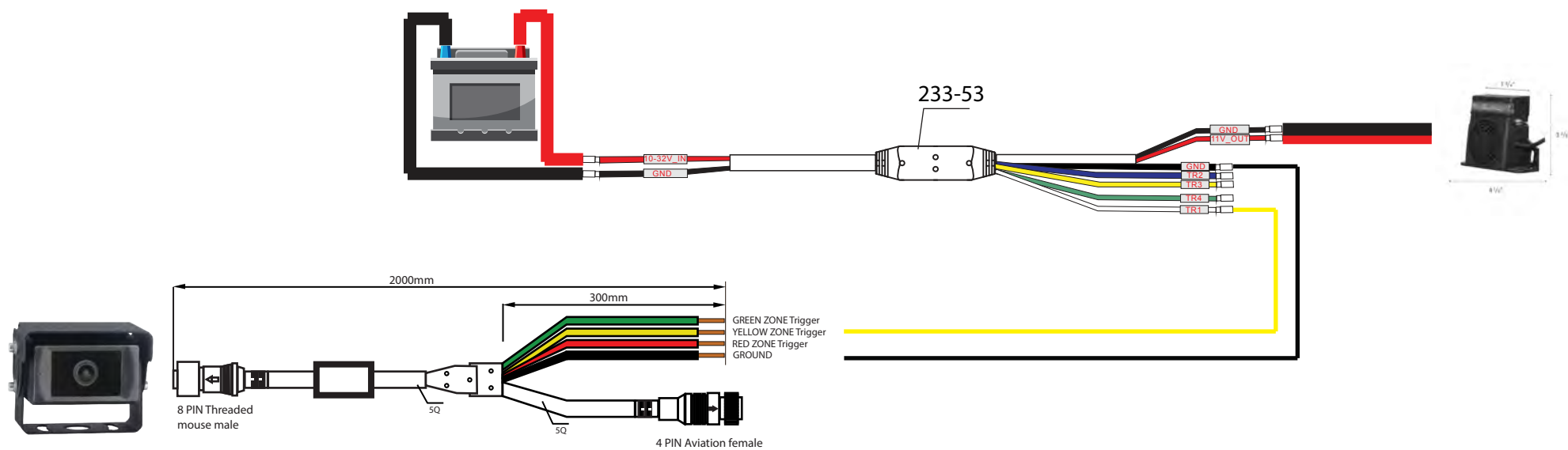
Symptoms	Possible Causes/Solutions
No picture, no sound	Improper connection of automobile adapter; Use of unauthorized power supply. The volume is set "0 " by mobile phone.
Cannot login the web page	Confirm that the external Wi-Fi module is connected to the USB interface and make sure the Wi-Fi button is on.

Notes:

# CONNECTING ALARM DEVICES TO PSM05 RED ZONE DEVICE



# CONNECTING ALARM DEVICES TO PSM05 YELLOW ZONE DEVICE



# CONNECTING ALARM DEVICES TO PSM05 GREEN ZONE DEVICE

