Dear users, functional setting of this device requires some expertise. Therefore, please carefully read and fully understand the instruction before use.

Pedestrian Detection System
User Manual

Thank you for choosing our product. Difference between models or product upgrading may result in appearance or features different from those described in the instruction; thus, it all depends on the actual product or you can contact the manufacturer.

Information contained herein is subject to irregular change without prior notice.
This instruction is applicable for Pedestrian Detection System products. Information contained herein may not be technically accurate. If any conflict between the product and the instruction is found during usage, it all depends on the actual product or you can contact the manufacturer. Information contained herein is subject to irregular change without prior notice.

1. **Installation Environment**
   - To extend the service life, please try to install the device in a place where vibration is weak;
   - To ensure normal heat dissipation, do not install the device in a poorly-ventilated area (such as trunk), and also keep about 15 cm away from other objects on the same level;
   - The device shall be horizontally installed and protected against water, humidity and lightning; in addition, keep the vehicle still during installation to prevent damage to the device due to falling off;
   - To ensure safe operation, keep the device, camera, cables and other accessories out of reach of passengers and driver.

2. **Avoid Electric Shock and Fire**
   - 8V-36V DC power supply is used for this device. Please note the positive and negative terminals during connection to prevent short circuit;
   - Please power the device off before connecting any peripheral;
   - Do not touch the power supply and the device with wet hands;
   - Do not spray liquid on the device to prevent internal short circuit or fire;
   - Do not place any other device directly on top of the camera;
   - Do not disassemble the housing without authorization to avoid damage or electric shock;

3. **Transport and Handling**
   - To prevent incidental damage to the device during transport. Handle the device with due care.
   - The original packaging materials and carton are preferred;
1. Installation................................................................................................................................. 4
   1.1 Install the host ............................................................................................................... 4
   1.2 Connect the power cord ............................................................................................... 4
   1.3 Alarm input Wiring ....................................................................................................... 6
   1.4 RS232 Device access .................................................................................................... 6
   1.5 Binocular camera wiring ............................................................................................... 6
2. Installation steps .................................................................................................................... 7
3. Bus installation case ................................................................................................................ 17
   3.1 Connect the door switch signal ................................................................................... 17
   3.2 Door switch signal detection ....................................................................................... 17
4. Installation Case ...................................................................................................................... 19
1. Installation

1.1 Install the host

The device supports 360° installation, please install the device in the suitable location according to the counter’s size of hole site. (Suggest installing horizontally to ensure that in extreme conditions the equipment can also work properly, taking into account the host of waterproof, moisture, lightning protection, to prevent car washing, moisture and other circumstances lead to car boot burned motherboard).

![Diagram of device](image)

1.2 Connect the power cord

Connect the 6-pin white plug to the 6-pin power input port on the rear panel of the MDVR, while the red and black cables are directly connected to the battery of the vehicle, i.e. positive terminal and negative terminal respectively, or to the main power. The yellow cable is connected to ACC, the vehicle control circuit switch (used to start the vehicle motor). The unit will be enabled automatically when the car key is enabled and disabled when the key is disabled.

When the device is not installed in a vehicle (such as monitoring systems in bus station, logistic transfer) or under test, you can use a switching power above DC12V-5A to supply the mainframe. In this case, twist the red and yellow cables as a cable to connect it to the positive terminal, while the black one is connected to the negative terminal separately.
1. Check that the battery provides voltage between 8V-36V before connection to prevent damage to the device.

2. Note the edge between power cords after connection to prevent damage to the battery or other electrical devices due to short-circuit.

3. It is recommended to connect the yellow cable to the ignition cable; otherwise, shutdown delay is not supported.

4. It is suggested that the vehicle mounted machine be directly powered from positive and negative terminals of the battery cell, or led from the mains power at the fuse without use of ground strap, which may influence normal operation of the mainframe due to negative pulse; The power cable used for positive and negative terminals shall have diameter of φ1.5mm or above.

Before connecting, check that the voltage ranges from 8V to 36V. If not, the device will...

This terminal is connected to the 6-pin power interface on the rear panel of the MDVR.
Connect the display output unit

This product supports two video outputs (one is φ3.5 Phone Jack on the front panel, and the other is 24PIN connector). A customer can connect to the display unit according actual conditions. Connect the 3-in-1 terminal of the supplied 4pin-AV output cable to the φ3.5 Phone Jack on the front panel, and the other terminal to the display unit.

Mainly: This connection allows the display to view the video screen of the binocular camera directly and can also be used to simulate the debug access test.

1.3 Alarm input Wiring

Connect the external sensor that needs to set the alarm to the 8 SENOR-IN ports corresponding to the rear panel I/O SENSOR. Passenger-Counting Camera needs to two I/O, and then through the matching shipping 24pin I/O interface cable connected to the car Counter.

E.g:

Sensor in1 access to the front door, counter access to the front door of the switch signal;
Sensor in2 pick the back door, the counter to get the back door of the switch signal.

1.4 RS232 Device access

This product provides 2 RS232 serial input, RS232 serial port and MDVR RS232 serial port connected to ensure the passenger data and MDVR data transmission. When installing the device, first connect the MDVRD 24pin I/O RS232 port line to the 24PIN I/O port on the rear panel of the passenger counter, and finally route it rationally.

1.5 Binocular camera wiring

Video cable connection
There are two sets of camera video input and output, four video input interface.

Channel 1
The first camera channel 1 camera's white connector (Left1) is connected to CAM1, the binocular camera's yellow connector (Right1) is connected to CAM2, and the camera on the binocular camera near the light side of the infrared light is the left camera (left image), The left camera is usually installed in the left side of the door (facing the door).

Channel 2
The second camera channel 2, the camera's white connector (Left2) connected to the CAM3, the yellow connector connected to the CAM4 on the yellow connector (Right2), the same, binocular camera near the infrared light on the side of the lens is Left camera (left image), the left camera is usually installed on the left hand side (facing the door).

CAM1, CAM2, CAM3, CAM4 can give the camera a separate power supply.

2. Installation steps

2.1 Select the device lens and the mounting position

Binocular camera installation method:
1. A host can connect two binocular cameras at the same time.
2. The binocular camera should be installed perpendicular to the ground. Our binocular cameras have two L-fixed brackets, each adjusted to a minimum of 2.5 degrees.
So that binocular cameras can be installed and fixed in a variety of locations and non-vertical surface.
3. In the middle of the back of the binocular camera lens, there are four small screw holes, fixed with M2.5 * 5 screws, easy to use ordinary camera stand or homemade boom, the camera lifting fixed.

4. Binocular camera installed in the middle of the upper (right camera installed in the center, with a photoresistor for the left camera) 230cm position, the camera below the detection area between 120cm-200cm installation location.

5. The installation must be strong, according to their height of the measured data to buy suitable for the focal length of the lens, installed in the appropriate height and width of the appropriate distance; to achieve the best results, different focal lengths of the camera installation height is not the same, you must first provide installation with height Lens.

6. Through Passenger Counting Meter terminal AV-OUT connecting a 7-inch car display to debug the installation location and angle, the display will show the binoculars of the four screens and the number of specific access personnel, and the meter can debug by simulation accesses personnel;
2.2 Binocular camera mounting height

Installation position: The center position of the binocular camera is 230cm in the middle of the detection area (door or channel). At this time the camera below the detection area between 120cm-200cm (if it is the bus, it is the distance from the first step), in the effective detection area, close to the binocular camera 25cm-40cm is a blind area.

As shown below:
3.6 The lens of the different height of the approximate data

The height of 220 cm

The height of 230 cm
The height of 240 cm

4.0 The lens of the different height of the approximate data

The height of 220 cm
The height of 230 cm

The height of 240 cm
Install chart

One host can connect one or two binocular cameras (channel 1 and channel 2) at the same time, as shown in the following figure:

Video server and binocular camera connection diagram
2.3 The binocular camera is connected to the host

There are two sets of camera video input and output, four input interfaces. The first group is 2 input Left1 (binocular video 1 left input), Right1 (binocular video 1 right input). The first binocular camera's white connector is connected to the left side of the channel, and the yellow connector of the binocular camera is connected to the top of the channel and identified at the camera connector. The camera on the side of the binocular camera near the light side of the infrared light is the left camera (left image), the left camera is usually installed in the door facing the left hand side.

The second group is 2 input Left2 (binocular video 2 left input), Right2 (binocular video 1 right input). The second binocular camera's white connector is connected to the left side of the channel and the yellow connector is connected to the right of the channel and is identified at the camera connector. The camera on the side of the binocular camera near the light side of the infrared light is the left camera (left image), the left camera is usually installed in the left side of the door facing the door.
Tail wiring diagram
3. Bus installation case

3.1 Connect the door switch signal

When the Passenger-Counting Camera is installed in the vehicle, we need to connect the front and rear door switch status signals to the external I/O input IN1, the external I/O input IN2 and GND to remove the gate switch to the counter accuracy influences.

3.2 Door switch signal detection

1) Signal Detection

Signal line wiring basically divided into the following three cases. First, door status lights. Second, the door status switch. Third, the door swing arm of the trip switch. For example, when the door is open, the indicator light is on and the lights are off when it is turned off. We can take the level signal on the line of the indicator light to know the physical status of the switch door.

If the model is complicated or can not get the signal switch door, we recommend that in the appropriate location of the front and rear doors to install a door switch or trip switch, in order to access the switch door signal directly.

Be sure to measure the following:

2) The way to measure the door status signal

With the multimeter DC voltage file 200V range (or greater than the circuit voltage range), multimeter ground connected to the exposed metal body, the other line to measure the line (pin) on the ground floor voltage, need to repeatedly open the door. If the voltage on the line changes with the door open and closed, it means that the counter can be used to operate the high / low level of this line.

If the multimeter does not respond, it may be "switch" caused by the way. At this point, you can use the ohmmeter with a multimeter to measure its switch door, whether there will be "interrupt / closed" situation, if there is, said that the switch mode.

Measure the status of the "switch":

When the door is open, is the switch signal turned off or closed?
When the door is closed, is the switch signal turned off or closed?
4. Installation Case

Bus:
Square or Station: