Service Manual of the Pedestrian Crossing Monitoring Camera Configuration Software

Contents

1. Pedestrian Crossing Monitoring and Early Warning Camera

1.1. Functional Description

● The warning camera used to monitoring and recognizing the pedestrians.

● To have the function of full screen perimeter protection and certain perimeter protection through the intelligent analysis of the real-time video images. Less than 4 certain perimeter protection is supported.

1.2. Exterior Feature

Monitoring and Recognition Camera

1.3. Feat ures

● The image of full screen intrusion alarm or certain zone intrusion alarm can be customized.

● Automatic switch of ICR infrared filter to make it can work normally day and night

● P2P is supported

● IP66
● Three stream is supported

1.4. Application Scenarios

The AI algorithm is adopted to the pedestrian crossing monitoring and early warning camera, and it can give warnings to the intrusion behaviors happened under various application scenarios timely and accurately through a large number of practices of real samples.

1.4.1. General Scenario

- Standard of day: the whole body can be seen clearly in the scenario if the pedestrian keeps upright.

- Standard of night: the whole body can be seen clearly in the scenario if the pedestrian keeps upright.
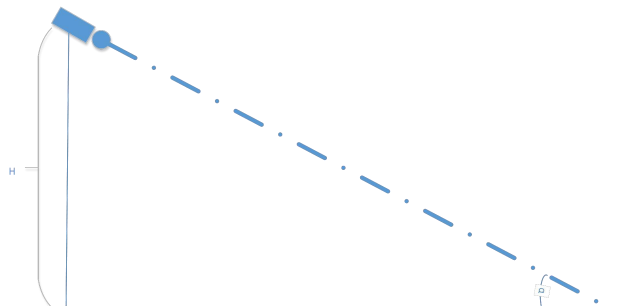- There is no interference of the upright pedestrian in rainy or snowy weathers.
Under the general scenario, the recall rate >=97.6%, and the accuracy >=97.3%.

1.4.2. Interference Scenario

- Shaking within the range of less than 1%.
- Shadow of the trees and the interference of the leaves and branches.
- The changing light: neon light, alarm light and the screen of the TV.
- Light spot of the automobile light, spot of on the road surface and the direct spot.
- The fluttering: flags and the hanging clothes. The appurtenants: the moving wheelchair and the walking sticks for the disabled.
- Awful weathers. The target invents happened in haze or snow days.
under the interference scenarios, the anti-interference rate >=98%.

1.5. Installation Instructions

The installation height of the camera ranges from 1 to 5 meters with sufficient illumination.

Installation Height and angle

According to the experience, the horizontal distance of pedestrian and the camera is 2.5 to 3 times of that of the installation height, if the feet of the pedestrian lies in the lower edge of the image. The algorithm works under different illumination.

2.   Configuration Software

Run the camera configuration software, LiveSettingTool, and the interface can be seen as follow in the first run(Figure 1).

Figure 1

2.1   Search for Devices

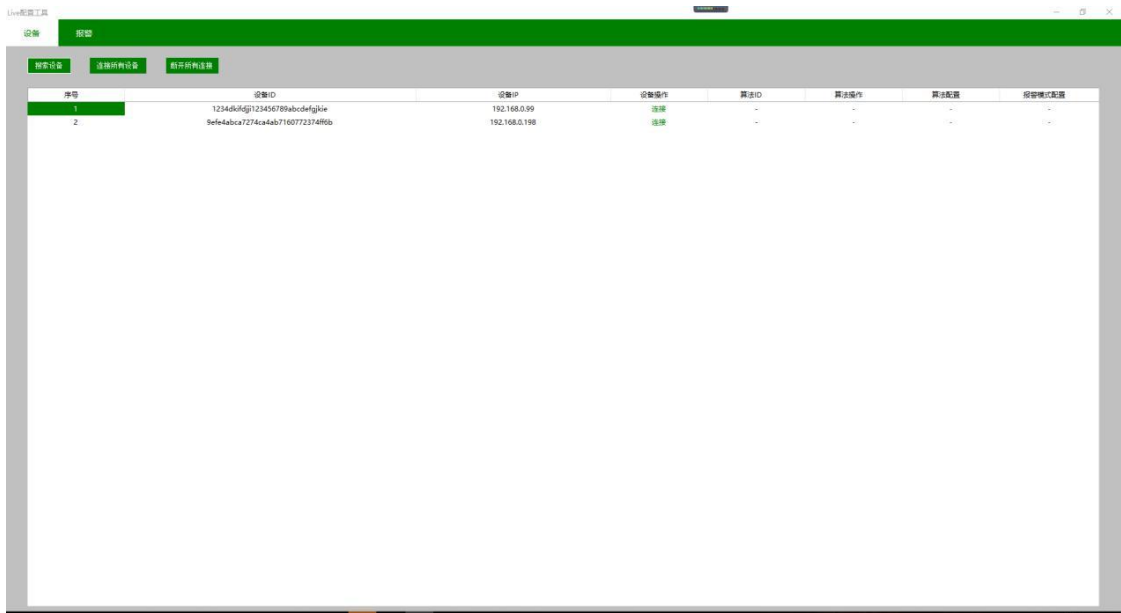Click the button of "Search the device" to find the prepared camera and other monitoring cameras run in the LAN.

Figure 2 Search for the devices

2.2 Connection

Click the button "connect all the devices"can connect all the devices online to this testing tool, or double-click the button "connection" of the corresponding camera under "device operation"to connect the camera.

Figure 3 connection

2.3 Algorithm Configuration

This monitoring and early warning camera can work normally without any configuration of parameters through the LiveSettingTool.

2.4 Warning

2.4.1 Warning List

Click the button of "warning" to enter the interface of warning list.

Figure 7 Warning List

2.4.2 Real-time Video

The left list of this interface shows the monitored alarm event by the camera, and the upper right side shows the alarming picture of present. The lower right part can show the real-time picture of the camera, but he RTSP address should be filled in the upper address bar, and the format should be put as follow: rtsp://admin:admin@192.168.0.168/ch01/0. The format of this address is different with different algorithms. If the real-time video cannot be played, please contact our company.

Figure 8 Real-time Video

2.5 Output

There are two output methods if the alarm event is monitored.

2.5.1 **HTTP**

This method is suitable for the client who use the integrated management platform of our company to receive and manage the alarms, or those who integrated the camera to their own management form. And the push contents include the pictures and other text messages of the alarm. And the clients can receive the numbers of pedestrian which is monitored when the alarm happens.

2.5.2 Switching Value

when the Alarm happens, the switching value can be output to trigger other devices, such as the audible and visual alarm, controller of the traffic light, the traffic light and so on.

In default situations, the output time of the switching value is 10s, which can be set freely.

2.6 Parameter Configuration

The parameters should be configured after the finishing of the addition of all devices .
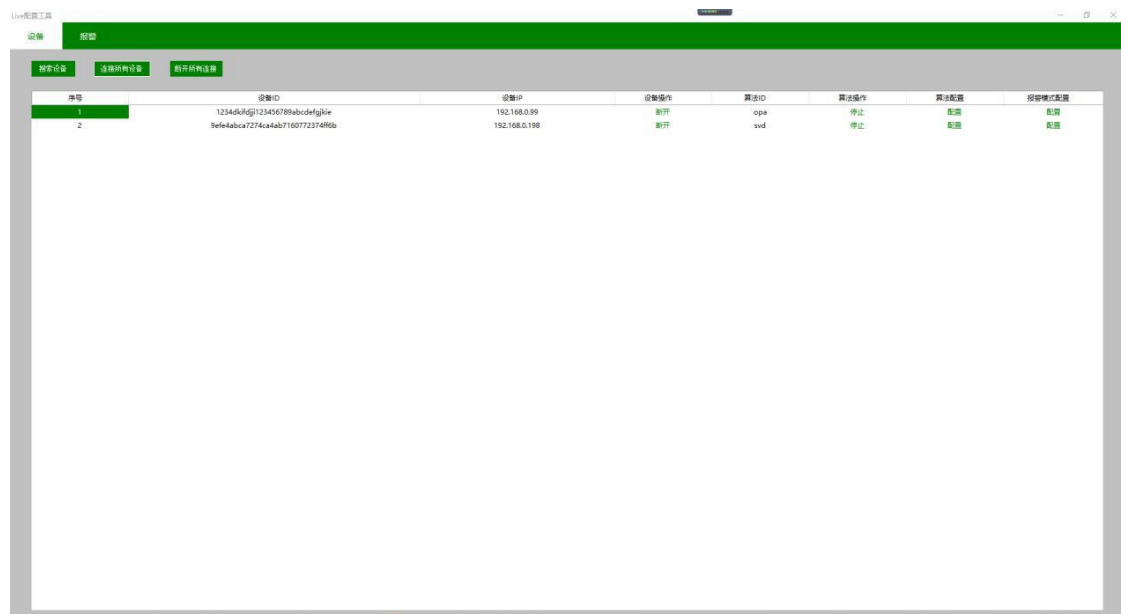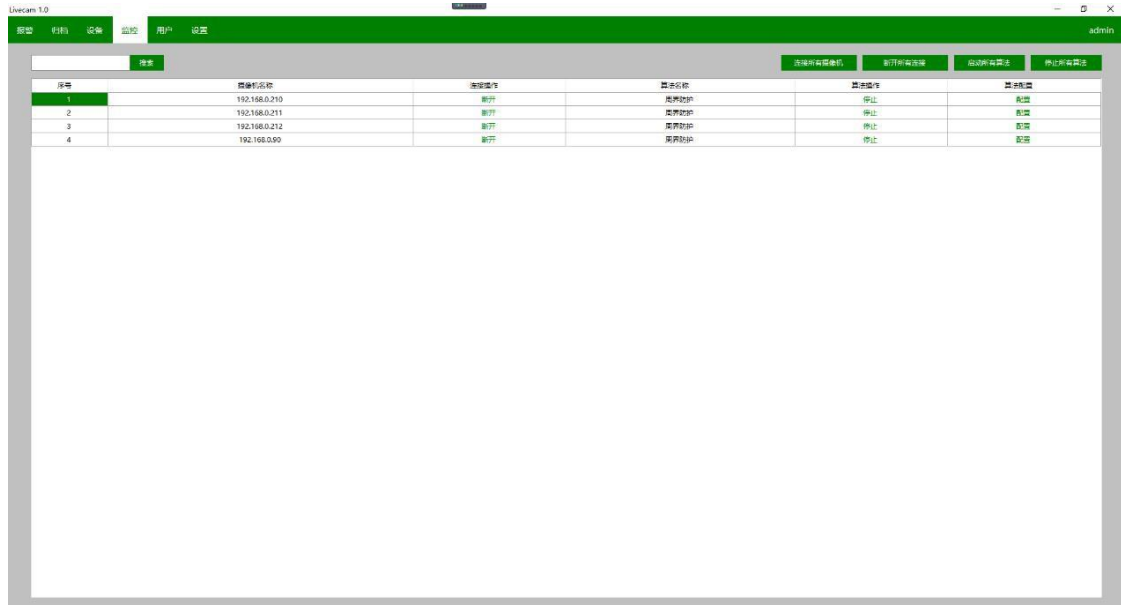
Figure 9 Parameter Configuration of the Camera

2.6.1 Connecting Operation

Batch connection or disconnection can be done to all the cameras through the button of
"Connect All" or "Disconnect All"on the upper part of the monitoring list. Or double-click the
"Connecting operation"of the certain camera to connect or disconnect it only.

2.6.2 Algorithm Operation

Batch start or stop the algorithm can be reached to all the cameras through clicking the button
of "Start all the algorithm" or "Stop all the algorithm"on the upper part of the monitoring list.
Or double-click the "Algorithm operation"of the certain cameral to start or stop it only.

2.6.3 Algorithm Configuration

This is the key operating step to the camera.
For the practical using environment and guard zone of every camera are quite diffenent, the
algorithm configuration should be unique for every camera. You can enter the configuration
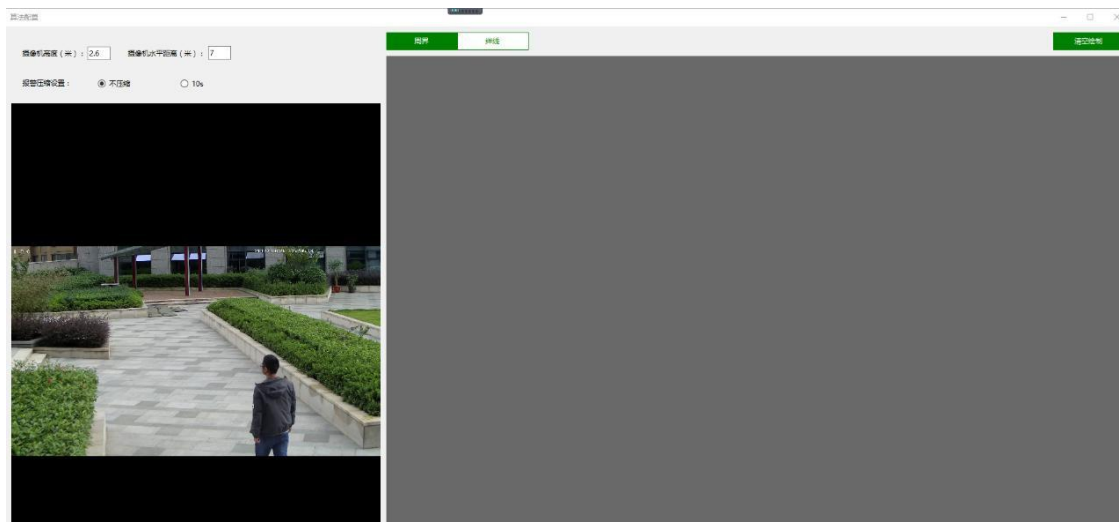interface through clicking the "Algorithm configuration"button of the certain camera.

Figure 10 Algorithm Configuration

The height of the camera refers to the vertical distance relative to the flat of the target, and this parameter should be accurate, which can increase the precision of the algorithm.

Horizontal distance of the cameral refers to the distance between the pedestrian and the camera when the feet of the pedestrian lies on the lower edge of the picture. And this parameter should be accurate, which can increase the precision of the algorithm.

Alarm compression device is applied to decrease the alarming quantity if there is target wandering in the area. No compression means that sustained alarm will be pushed if the target is monitored. 10s means that the alarm will be pushed every 10s if it is monitored.

The left part shows the real-time video. If clicking the snapshoot , the scenario snapshoot will be set on the right part, and you can set the area alarm rules in the snapshoot.

The camera is set in the full screen zone alarm pattern.

If the full screen zone alarm pattern cannot meet the needs of the client, the users can click the button of "Eliminate the sketch"on the upper right part to eliminate the full screen zone alarm dialog, and this method can also be adopted to the elimination of other alarm rules.

2.6.4 Draw the Perimeter Rule Dialog

Click the "Perimeter" button on the upper left part of the snapshoot to activate the perimeter drawing pattern.

The convex polygon perimeter rule dialog with 4 to 8 vertexes is applied to one image scene in this system. Click any position of the scene to start your sketch, and left-click to draw a new vertex, and double-click to draw the last one.

The finished perimeter rule dialog can be revised or deleted separately.

Revise: left-click the rule dialog, which will changes to red. Hold down the left button of the mouse in the dialog to move it, and hold down the left button of the mouse in the vertex can change the shape of the rule dialog. And the number of the vertex cannot be changed.

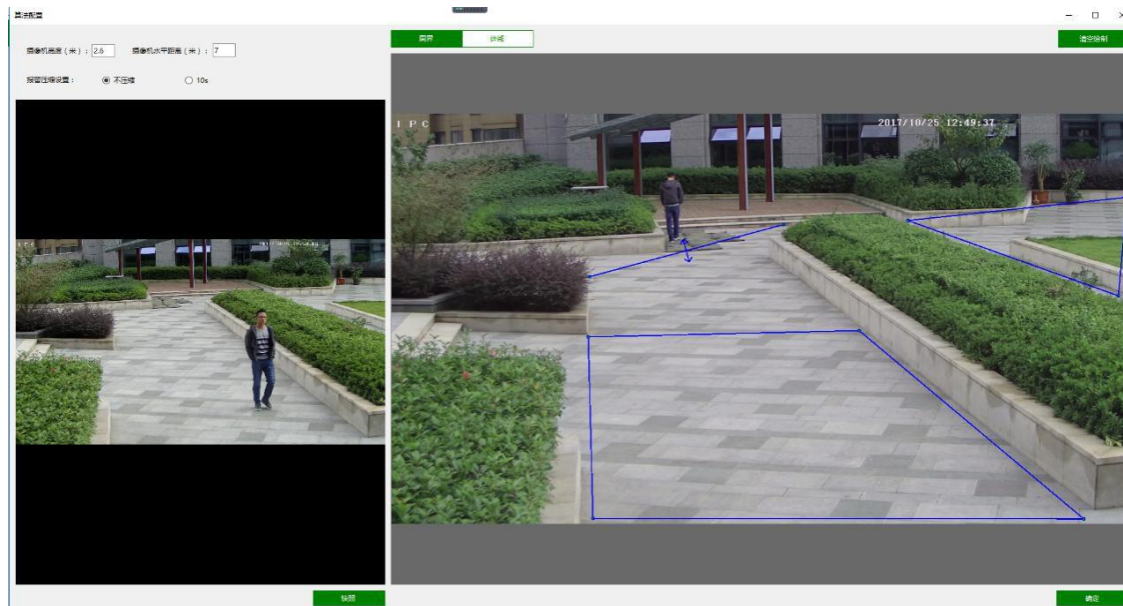Delete: right-click any position of the rule dialog, and the button of "Delete"will appear. Then click this button to delete the rule dialog.

Figure 10 Draw the rule dialog