

WBOX IP Camera Intelligent Analysis Operation Guide

V1.1

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Overview

Purpose

This document describes the installation and use of the Intelligent Analysis device as well as precautions.

Terminology

- **Field of View** – the whole screen that a camera is capable of displaying.
- **Deployment Area** – the still area with any shape in the field of view set by a user.
- **Deployment Line** – the line with a static direction in the field of view set by a user.
- **Target** – the moving object of a certain type (person, car, person or car) appearing in the field of view.
- **False Alarm** – a false alarm generated because of interference sources (such as illumination change, leaf waggle and shadow).
- **Alarm missing** – an alarm meeting user-defined target trigger settings but not alarm.

Functions

Below is the list of all the functions of Intelligent Analysis.

ID	Function Name	Availability	Remark
1	Perimeter	√	
2	Single Virtual Fence	√	
3	Double Virtual Fences	√	
4	Loiter	√	
5	Multiple Loiter	√	
6	Object Left	√	
7	Object Removed	√	
8	Abnormal Speed	√	
9	Converse	√	
10	Illegal Parking	√	
11	Signal Bad	√	includes Camera Tamper and Camera Shift

Operating Environment

- Intelligent Analysis is currently available on Ambarella S2 only
- **Operating System:** Microsoft Windows 7/Windows XP (32/64-bit operating system supported)
- **CPU:** Intel core i3 and above
- **Memory:** 1 GB and above
- **Display Resolution:** 1024x768 or above supported

 NOTE

- The software does not support pure 64-bit system. The 64-bit system mentioned above supports 32-bit software.

Precautions

Precautions for Installation

- The camera stays level with the horizon, without inclination.
- The installation height is more than 2 meter indoors and within 5-8 meters outdoors. If climbing over the wall needs to be monitored, the camera height can be 2 meter higher than the wall.
- The angle of depression is larger than 15°.
- Do not install the device against the light.
- Try to install the device in a place where the light reflection from ground is weak in the case of indoor installation.
- Try to keep the sky out of the field of view, because false alarms may be generated due to illumination changes or cloud movement.

Other Precautions

- Try to disable automatic white balance, the switch of which tends to cause alarm missing.
- Set the camera to fixed focus.
- Do not switch from color mode to black & white mode frequently, otherwise, alarm missing occurs.
- Try not to use the infrared all-in-one machine outdoors, which attracts insects and causes false alarms.
- The target cannot be oversize or undersize. The minimum target detectability is 8x8 pixels. The target takes up 1/20-1/2 of the screen in height, excess of which leads to alarm missing.
- The background modeling after parameter setting needs 4-8 seconds, during which a triggered alarm is not reported.
- A certain period of time is required from target appearance to recognition, so the duration of a target appearing in the field of view normally needs to be more than 2 seconds.
- Avoid too many moving targets in the field of view, which may lead to alarm missing.
- The fill-in light at night needs to be uniform.
- The wide-angle lens with short focal length (less than 4 mm) is recommended for small indoor space.

Contents

Overview Error! Bookmark not defined.

1 Parameter Settings 1

1.1 Parameter Settings 1

2 Function Settings 3

2.1 Perimeter 3

2.2 Single Virtual Fence 6

2.3 Double Virtual Fences 9

2.4 Loiter 13

2.5 Multiple Loiter 17

2.6 Object Left Error! Bookmark not defined.0

2.7 Object Removed Error! Bookmark not defined.3

2.8 Abnormal Speed 25

2.9 Converse 28

2.10 Illegal Parking 31

2.11 Signal Bad 34

1 Parameter Settings

1.1 Parameter Settings

After logging in to the device, select **Intelligent Analysis > Advanced** to access the **Advanced** setting interface, as shown in Figure 1-1.

Figure 1-1 Advanced Parameter Setting Interface

Advanced

Scene: Outdoor

ID:

Real Size In Scene(cm): 0

☒ Depth of field validate proportion: 1000 cm2

Delete

Refresh Apply

Scene Setting

You can set the scene of the camera, ID, real size in scene and depth of field validate on **Scene** settings. Table 1-1 describes the specific parameters.

Table 1-1 Advanced Parameter Description

Parameter	Description	Setting
Scene	The scene which camera installed Select indoor/outdoor base on the Environment.	[How to set] Select from the drop-down list. [Default value] Outdoor
ID	Mark the line base on the ID of line; select the according line by the ID.	[How to set] Select from the drop-down list.
Real Size in scene (cm)	Length of line according to the real size in scene. The default value is 0 and the setting value is 0-99999 centimeters.	[How to set] Enter a value in the area box. [Default value] 0
Depth of field validate	Validate the size of setting area in the scene according the marking line.	[How to set] Click and enter a value in the area box.

Setting methods and rules

Set the advanced parameters before setting function parameters. Draw lines in advanced parameters interface so that the true object has a mapping relation with the image object. The method and rules for drawing line as below:

- 2-4 vertical lines or 2 vertical lines and 2 ground lines need to be entered.
- In the case of low marking requirement, two vertical lines can meet most scene requirements. Normally, the vertical line is marked based on person height.
- The lines are distributed near and far. Two vertical lines are in the scene, one near and the other far. On the screen, draw a vertical line along the target object height, measure the actual length of this target, and enter the actual length in **Real Size in Scene** box for saving. Similarly, two horizontal lines on the ground are in the scene, one near and the other far. Measure and enter the actual length.
- Click a marking line (turning red after clicking) and click **Delete** to delete the marking line
- Click a marking line (turning red after clicking), to modify the marking line data. You can also modify the line parameters by selecting a number and enter the actual size in **Real Size in Scene** box on the advanced parameter interface.

2 Function Settings

2.1 Perimeter

Description

The **Perimeter** function refers to that an alarm is generated when the targets of specified types (such as person, car, and both person and car) enter the deployment area.

Procedure

Step 1 Select **Intelligent Analysis > Perimeter** to access the Perimeter interface, as shown in Figure 2-1.

Figure 2-1 Perimeter Setting Interface

Perimeter

Enable ☐ OFF

Limit Target Type ☐ OFF

Limit Target Size ☐ OFF

Upload Target Info ☐ OFF

Output Channel ☐ OFF

Alarm Record ☐ OFF

SMTP ☐ OFF

FTP Upload ☐ OFF

Clear

Sun 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Mon

Tues

Wed

Thur

Fri

Sat

Refresh Apply

Step 2 Set all parameters for perimeter. Table 2-1 describes the specific parameters.

Table 2-1 Perimeter Parameter Description

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF
Limit Target Type	Effective alarms are set based on target type, with options of Person or Car, person, car. When the device is used indoors, because of small space and large targets, alarms are triggered by person sometimes even if car is selected, leading to false alarms. It is recommended to set the target type to person for indoor use.	[How to set] Click to enable Limit Target Type. [Default value] OFF
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in Advanced parameter; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF

Parameter	Description	Setting
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-2.

Figure 2-2 Deployment Area Setting Interface



NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

Method 1: Click left mouse button to select any time point within 0:00-24:00 from Monday to Sunday as shown in Figure 2-3.

Method 2: Hold down the left mouse button, drag and release mouse to select the deployment time within 0:00-24:00 from Monday to Sunday.

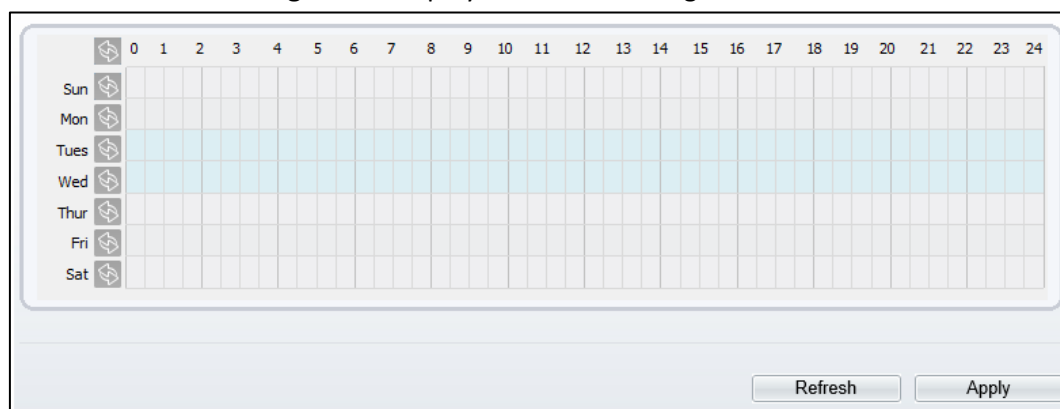
 NOTE

When you select time by dragging the cursor, the cursor cannot be moved out of the time area.
Otherwise, no time can be selected.

Method 3: Click in the deployment time page to select the whole day or whole week.

Deleting deployment time: Click again or inverse selection to delete the selected deployment time.

Figure 2-3 Deployment Time Setting Interface



2.2 Single Virtual Fence

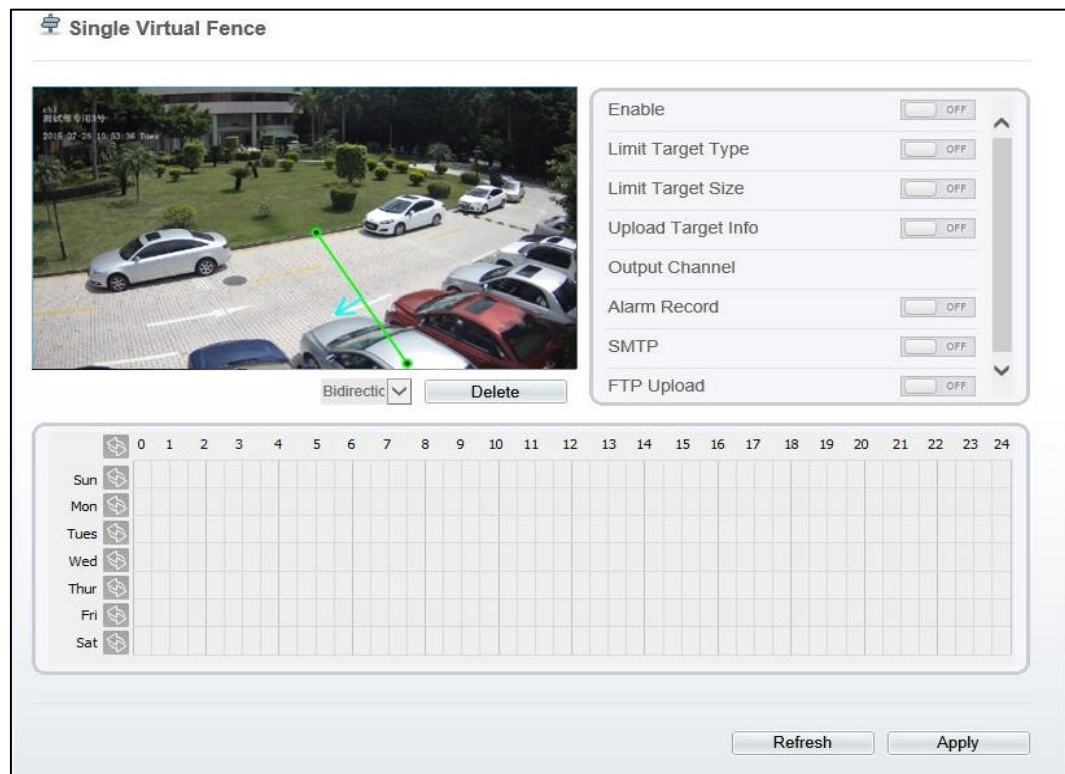
Description

A **Single Virtual Fence** is a line that is set at a concerned position within the monitored field of view and specifies the forbidden travel direction. An alarm is generated when the targets of specified types (such as person or car) cross this line.

Procedure

Step 1 Select **Intelligent Analysis > Single Virtual Fence** to access the **Single Virtual Fence** setting interface, as shown in Figure 2-4.

Figure 2-4 Single Virtual Fence Setting Interface



Step 2 Set all parameters for the single virtual fence. Table 2-2 describes the specific parameters.

Table 2-2 Description of Parameters for Single Virtual Fence

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF
Limit Target Type	Effective alarms are set based on target type, with options of Person or Car, person, car. When the device is used indoors, because of small space and large targets, alarms are triggered by person sometimes even if car is selected, leading to false alarms. It is recommended to set the target type to person for indoor use.	[How to set] Click to enable Limit Target Type. [Default value] OFF
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF

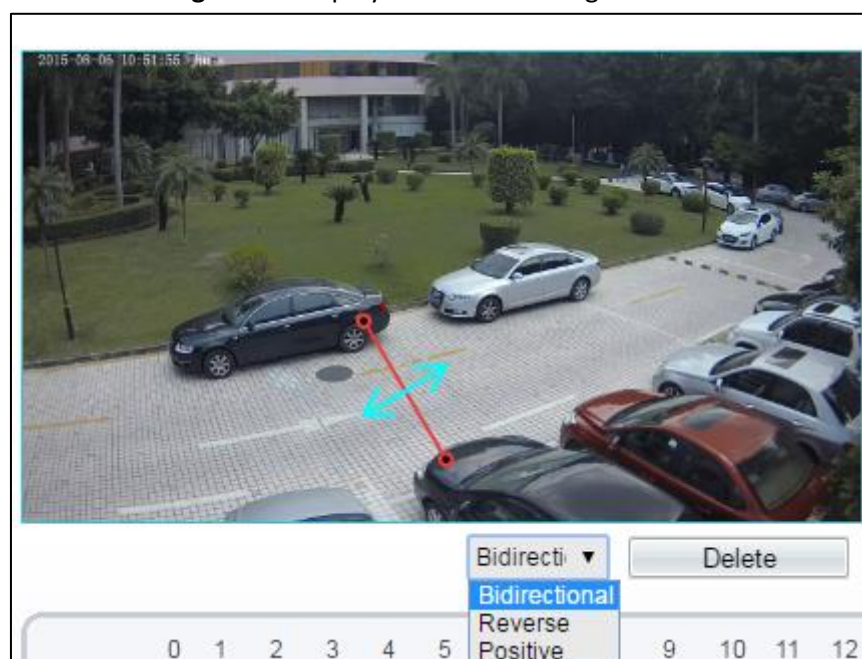
Parameter	Description	Setting
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP. [Default value] OFF
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Drawing a line: Move the cursor to the drawing interface, hold down the left mouse button, and move the cursor to draw a line. When you release the left mouse button, a single virtual fence is generated.

Setting a single virtual fence: Click a line (and the trip line turns red) to select the single virtual fence and set its direction as Positive, Reverse or Bidirectional, or delete the selected line. You can also press and hold left mouse button at the endpoint of a single virtual fence and move the mouse to modify the position and length of this single virtual fence. You can right-click to delete the single virtual fence, as shown in Figure 2-5.

Figure 2-5 Deployment Area Setting Interface



NOTE

- A single virtual fence is not within any deployment area, therefore, when an alarm is generated, the trace always exists. Only when the target object moves out of the field of view, the trace disappears.
- Try to draw the single virtual fence in the middle, because the recognition of a target takes time after target appearance on the screen and an alarm is generated only when the object is recognized to have crossed the single virtual fence.
- The single virtual fence which detects person foot as the recognition target cannot be too short, because a short single virtual fence tends to miss targets.

Step 4 Set deployment time.

For the details, please refer to *2.1 Step 4 Set deployment time*.

2.3 Double Virtual Fences

Description

Double Virtual Fences refers to two lines that are set at a concerned special position within the field of view and specify the forbidden travel direction. When the targets of specified types (such as person or car) move along the set travel direction and cross these lines in a certain order (line 1 followed by line 2) in pass max time, an alarm is generated.

Procedure

Step 1 Select **Intelligent Analysis > Double Virtual Fences** to access the **Double Virtual Fences** setting interface, as shown in Figure 2-6.

Figure 2-6 Double Virtual Fences Setting Interface

Double Virtual Fences

Enable ☐ OFF

Limit Target Type ☐ OFF

Limit Target Size ☐ OFF

Upload Target Info ☐ OFF

Pass Max Time(Sec)

Output Channel

Alarm Record ☐ OFF

SMTP ☐ OFF

Reverse

Sun Mon Tues Wed Thur Fri Sat

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Step 2 Set all parameters for the double virtual fences. Table 2-3 describes the specific parameters.

Table 2-3 Description of Parameters for Double Virtual Fences

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF
Limit Target Type	Effective alarms are set based on target type, with options of Person or Car, person, car. When the device is used indoors, because of small space and large targets, alarms are triggered by person sometimes even if car is selected, leading to false alarms. It is recommended to set the target type to person for indoor use.	[How to set] Click to enable Limit Target Type. [Default value] OFF
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Pass Max Time (Sec)	The maximum time for passing the virtual fences.	[How to set] Click and input a value.. [Default value] 5
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.

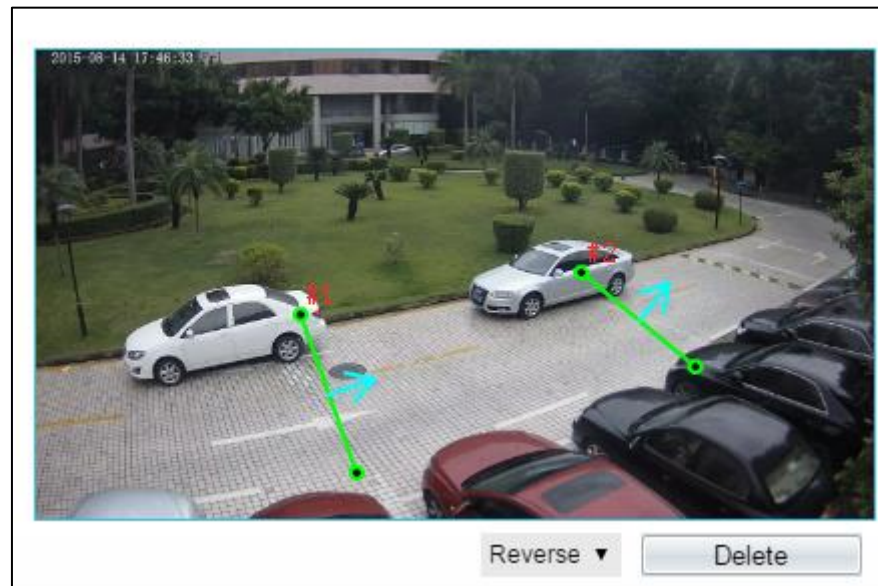
Parameter	Description	Setting
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP. [Default value] OFF
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Drawing a line: Move the cursor to the drawing interface, hold down the left mouse button, and move the cursor to draw two lines. When you release the left mouse button, two numbered virtual fences are generated. Choose either of the double virtual fences to set the direction to Positive or Reverse.

Setting double virtual fences: Click one of the double virtual fences (and the virtual fence turns red) to select this virtual fence and set the direction to Positive or Reverse, or delete the selected line. You can also press and hold left mouse button at the endpoint of a virtual fence and move the mouse to modify the position and length of this virtual fence. You can right-click to delete the double virtual fences, as shown in Figure 2-7.

Figure 2-7 Deployment Area Setting Interface



 NOTE

- The two virtual fences are in sequential order. An alarm is generated only when a target crosses virtual fence 1 and then virtual fence 2 within the set maximum passing time.
- The double virtual fences are not within any deployment area, therefore, when an alarm is generated, the trace always exists. Only when the target object moves out of the field of view, the trace disappears.
- Try to draw double virtual fences in the middle, because the recognition of a target takes time after target appearance on the screen and an alarm is generated only when the object is recognized to have crossed the double virtual fences.
- The double virtual fences which detect person foot as the recognition target cannot be too short, because short double virtual fences tend to miss targets.

Step 4 Set deployment time.

For the details, please refer to *2.1 Step 4 Set deployment time*.

2.4 Loiter

Description

Loiter allows setting the shortest loitering time for a (single) target of specified type (such as person or car) within the deployment area in the field of view. When the loitering time of a (single) target within this area meets the set shortest loitering time, an alarm is generated.

Procedure

Step 1 Select **Intelligent Analysis > Loiter** to access the Loiter setting interface, as shown in Figure 2-8.

Figure 2-8 Loiter Setting Interface

Step 2 Set all parameters for loitering. Table 2-4 describes the specific parameters.

Table 2-4 Loitering Parameter Description

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF
Limit Target Type	Effective alarms are set based on target type, with options of Person or Car, person, car. When the device is used indoors, because of small space and large targets, alarms are triggered by person sometimes even if car is selected, leading to false alarms. It is recommended to set the target type to person for indoor use.	[How to set] Click to enable Limit Target Type. [Default value] OFF

Parameter	Description	Setting
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF
The Shortest Time (Sec)	The time that a target object spends in loitering cannot be less than the shortest loitering time. Setting range: 5-60 seconds.	[How to set] Enter a value in the area box. [Default value] 10s
Start the Path Judgment	The enabling of path analysis makes loitering judgment accurate by using the software algorithm, for example, no alarm is generated when a person walks along a straight line if the button set ON .	[How to set] Click to enable Start the Path Judgment and enable path analysis.
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF

Parameter	Description	Setting
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP. [Default value] OFF
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-9.

Figure 2-9 Deployment Area Setting Interface



 NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

For the details, please refer to *2.1 Step 4 Set deployment time*.

2.5 Multiple Loiter

Description

Multiple Loiter allows setting the shortest loitering time for multiple targets of specified type (such as person or car) within the deployment area in the field of view. When the loitering time of the multiple targets within this area meets the set shortest loitering time, an alarm is generated.

Procedure

Step 1 Select **Intelligent Analysis > Multi Loiter** to access the **Multi Loiter** setting interface, as shown in Figure 2-10.

Figure 2-10 Multi Loiter Setting Interface

Step 2 Set all parameters for multiple loitering. Table 2-5 describes the specific parameters.

Table 2-5 Multiple Loitering Parameter Description

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF

Parameter	Description	Setting
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF
Limit Numbers	When Limit Numbers is set to OFF, an alarm is generated no matter how many people loiter. When Limit Numbers is set to ON, if the minimum number is set to 2 and the maximum number is set to 3, an alarm is generated for 2-3 people loitering. Other settings are the same as loitering.	[How to set] Click to enable Limit Numbers.
The Shortest Time (Sec)	The time that a target object spends in loitering cannot be less than the shortest loitering time. Setting range: 5-60 seconds.	[How to set] Enter a value in the area box. [Default value] 10s
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF

Parameter	Description	Setting
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-11.

Figure 2-11 Deployment Area Setting Interface



 NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

For the details, please refer to 2.1 Step 4 Set deployment time.

2.6 Object Left

Description

The **Object Left** function refers to that an alarm is generated when the dwelling time of an object within the deployment area meets the set shortest dwelling time.

Procedure

Step 1 Select **Intelligent Analysis > Object Left** to access the **Object Left** setting interface, as shown in Figure 2-12.

Figure 2-12 Object Left Setting Interface

Step 2 Set all parameters for object left. Table 2-6 describes the specific parameters.

Table 2-6 Description of Parameters for Object Left

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF

Parameter	Description	Setting
Minimum (Maximum) Size (cm ²)	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 100 square centimeters and the maximum 10000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Enter a value in the area box.
Shortest Dwelling Time (Sec)	An alarm is generated when the object left time is longer than the shortest dwelling time. Setting range: 5-60 seconds.	[How to set] Enter a value in the area box. [Default value] 5s
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF

Parameter	Description	Setting
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-13.

Figure 2-13 Deployment Area Setting Interface



 NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

For the details, please refer to *2.1 Step 4 Set deployment time*.

2.7 Object Removed

Description

The **Object Removed** function refers to that an alarm is generated when the removing time of an object within the deployment area meets the set shortest removing time.

Procedure

Step 1 Select **Intelligent Analysis > Object Removed** to access the **Object Removed** setting interface, as shown in Figure 2-14.

Figure 2-14 Object Removed Setting Interface Setting Interface

Step 2 Set all parameters for object removed. Table 2-7 describes the specific parameters

Table 2-7 Description of Parameters for Object Removed

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF

Parameter	Description	Setting
Minimum (Maximum) Size(cm ²)	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 100 square centimeters and the maximum 10000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Enter a value in the area box.
Shortest Removing Time (Sec)	An alarm is generated when the object removed time is longer than the shortest removing time. Setting range: 5-60 seconds.	[How to set] Enter a value in the area box. [Default value] 5s
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF

Parameter	Description	Setting
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-20

Figure 2-15 Deployment Area Setting Interface



 NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

For the details, please refer to *2.1 Step 4 Set deployment time*.

2.8 Abnormal Speed

Description

Abnormal Speed allows setting the travel speed criteria for a target within the deployment area on the video screen. When the travel speed of a target of specified type (such as person or car) within this area meets the alarm condition, an alarm is generated.

Procedure

Step 1 Select **Intelligent Analysis > Abnormal Speed** to access the **Abnormal Speed** setting interface, as shown in Figure 2-16.

Figure 2-16 Abnormal Speed Setting Interface

Step 2 Set all parameters for the abnormal speed. Table 2-8 describes the specific parameters

Table 2-8 Description of Parameters for Abnormal Speed

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF

Parameter	Description	Setting
Limit Target Type	Effective alarms are set based on target type, with options of Person or Car, person, car. When the device is used indoors, because of small space and large targets, alarms are triggered by person sometimes even if car is selected, leading to false alarms. It is recommended to set the target type to person for indoor use.	[How to set] Click to enable Limit Target Type. [Default value] OFF
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF
Minimum (Maximum) Speed (m/s)	Set prohibited speeds. When a target object crosses an area at a speed between the minimum and maximum speeds, an alarm is generated. Setting range: 0-10 m/s.	[How to set] Enter a value in the area box.
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF

Parameter	Description	Setting
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-17.

Figure 2-17 Deployment Area Setting Interface



 NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

For the details, please refer to 2.1 Step 4 Set deployment time.

2.9 Converse

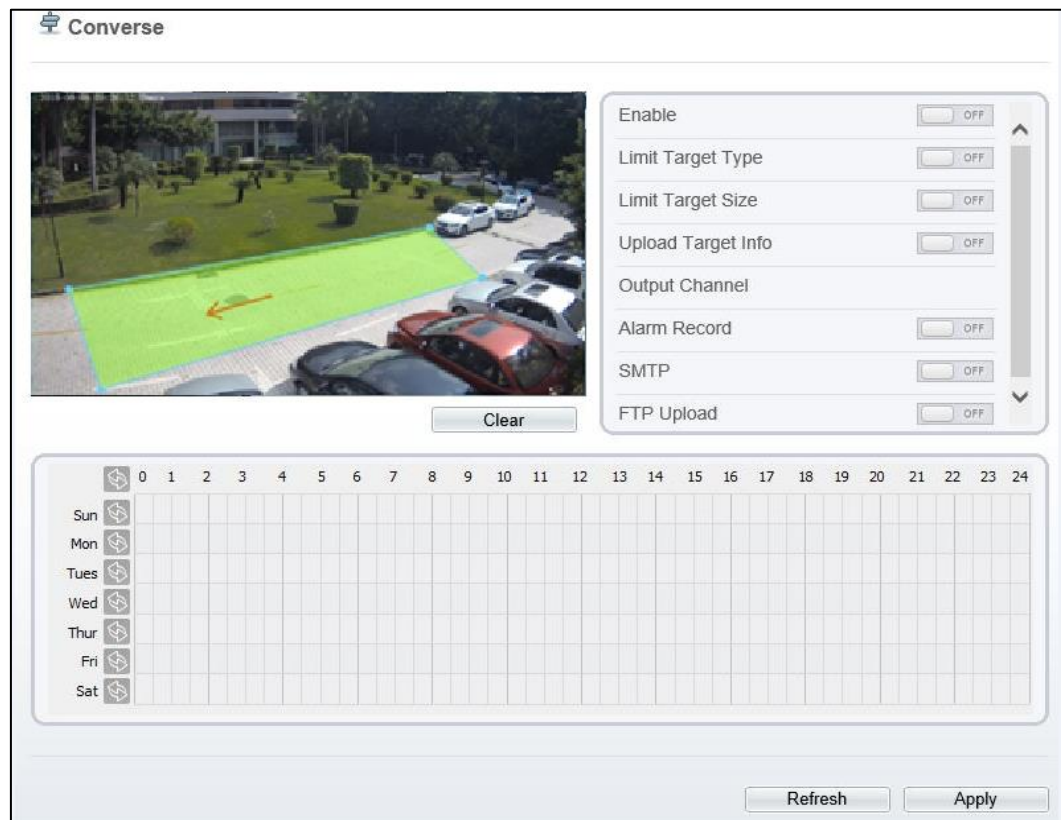
Description

Converse allows setting the travel direction criteria for a target within an area on the video screen. When a target of specified type (such as people or car) within this area moves in the set travel direction, an alarm is generated.

Procedure

Step 1 Select **Intelligent Analysis > Converse** to access the **Converse** setting interface, as shown in Figure 2-18.

Figure 2-18 Converse Setting Interface



Step 2 Set all parameters for converse. Table 2-9 describes the specific parameters.

Table 2-9 Converse Parameter Description

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF

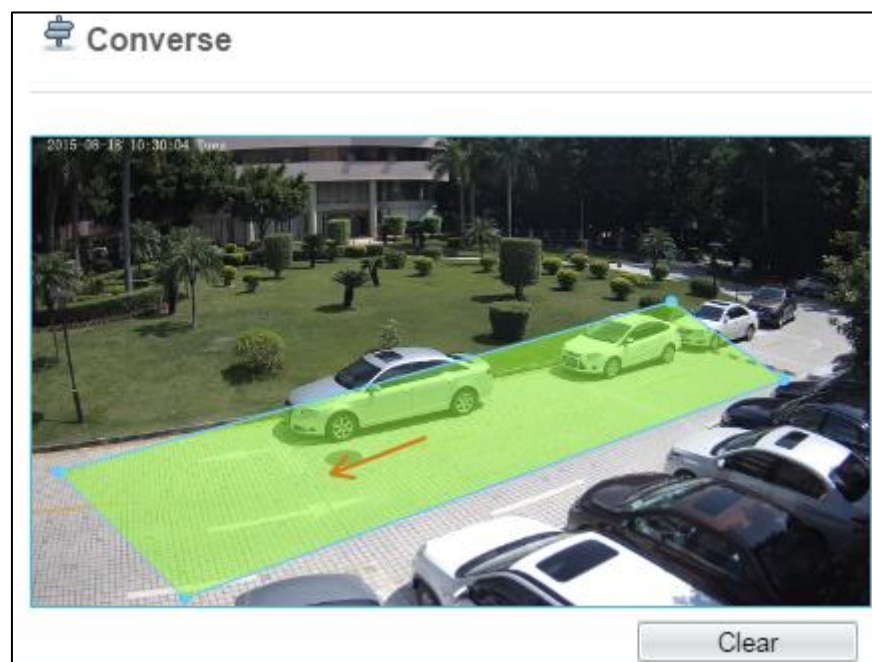
Parameter	Description	Setting
Limit Target Type	Effective alarms are set based on target type, with options of Person or Car, person, car. When the device is used indoors, because of small space and large targets, alarms are triggered by person sometimes even if car is selected, leading to false alarms. It is recommended to set the target type to person for indoor use.	[How to set] Click to enable Limit Target Type. [Default value] OFF
Limit Target Size	The target size for triggering an effective alarm is set based on the actual target size. The minimum size is 1000 square centimeters and the maximum 100000 square centimeters. When setting the target size, you need to well set "Real size in scene" in advanced parameters; otherwise no alarms may be generated.	[How to set] Click to enable Limit Target Size. [Default configuration] OFF
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF

Parameter	Description	Setting
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, move the arrow in the field can set the direction of converse as shown in Figure 2-19.

Figure 2-19 Deployment Area Setting Interface



NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

Details please refer to 2.1 Step 4 Set deployment time.

2.10 Illegal Parking

Description

Illegal Parking allows setting the dwelling time criteria for a target within the deployment area on the video screen. When the dwelling time of a target of specified type (car) within this area meets the set allowed parking time, an alarm is generated.

Procedure

Step 1 Select **Intelligent Analysis > Illegal Parking** to access the **Illegal Parking** setting interface, as shown in Figure 2-20.

Figure 2-20 Illegal Parking Setting Interface

Step 2 Set all parameters for illegal parking. Table 2-10 describes the specific parameters.

Table 2-10 Description of Parameters for Illegal Parking

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF

Parameter	Description	Setting
Minimum (Maximum) Size(cm ²)	The target size for triggering an effective alarm is set based on the actual target size. The default value is minimum size is 1000square centimeters and the maximum size is 1000000 square centimeters. When setting the target size, you need to well set “Real size in scene” in advanced parameters; otherwise no alarms may be generated.	[How to set] Enter a value in the area box.
Allowed parking time (Sec)	An alarm is generated when the object left time is longer than the shortest dwelling time. Setting range: 5-60 seconds.	[How to set] Enter a value in the area box. [Default value] 5
Upload Target Info	Enable the function of uploading target information by clicking  below the real-time video in a flash browser to turn  into  . When an alarm is triggered, the target movement trace can be displayed (The trace can be seen only within the deployment area and disappears after the target leaves the deployment area)	[How to set] Click to enable Upload Target Info. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
SMTP	Enable the button to enable SMTP sever.	[How to set] Click to enable SMTP. [Default value] OFF
FTP Upload	Enable the button to enable File Transfer Protocol.	[How to set] Click to enable FTP Upload. [Default value] OFF

Parameter	Description	Setting
PTZ Type	Set PTZ type for dome cameras and select corresponding PTZ type: Preset/Scan/Track/Tour.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set a deployment area.

Move the cursor to the drawing interface and click to generate a point, move the cursor to draw a line, and then click to generate another point. This is how a line is generated. In this way, continue to draw lines to form any shape, and right-click to finish line drawing, as shown in Figure 2-29

Figure 1-1 Deployment Area Setting Interface



NOTE

- A drawn line cannot cross another one, or the line drawing fails.
- Any shape with 32 sides at most can be drawn.
- The quantity of deployment areas is not limited yet and will be described in future when a limit is applied.

Step 4 Set deployment time.

Details please refer to *2.1 Step 4 Set deployment time.*

2.11 Signal Bad

Description

Signal Bad refers to when an alarm is generated if an event such as tampered or shifted occurs.

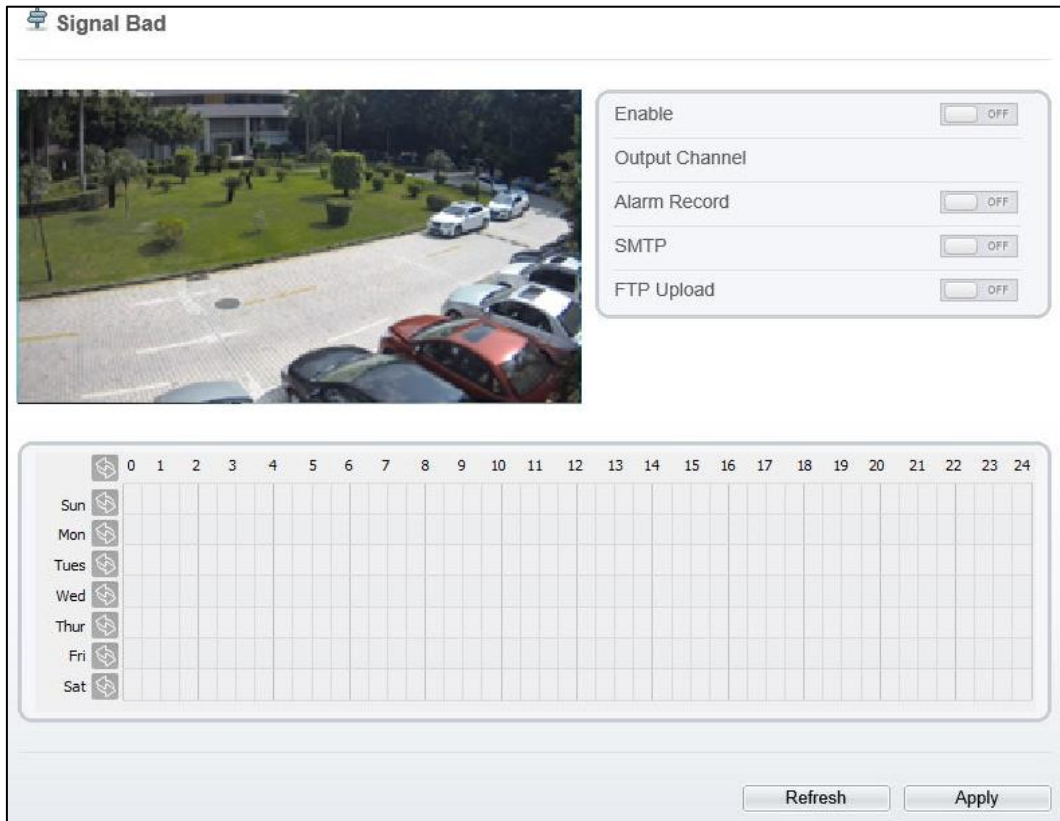
NOTE

- Currently, an alarm is generated only when more than 75% area of a video is obscured.
- When the ambient is dark and the gray average is less than 40, an alarm of Signal Bad is generated.

Procedure

Step 1 Select **Intelligent Analysis > Signal Bad** to access the **Signal Bad** setting interface, as shown in Figure 2-22.

Figure 2-22 Signal Bad Setting Interface



The screenshot shows the 'Signal Bad' configuration window. It features a live video feed of a parking lot on the left. On the right, there are five settings: 'Enable' (OFF), 'Output Channel' (empty), 'Alarm Record' (OFF), 'SMTP' (OFF), and 'FTP Upload' (OFF). At the bottom, there is a calendar grid for days 0-24 and days of the week (Sun-Sat). Each day has a small camera icon next to it. At the very bottom are 'Refresh' and 'Apply' buttons.

Step 2 Set all parameters for signal bad. Table 2-11 describes the specific parameters.

Table 2-11 Description of Parameters for Signal Bad

Parameter	Description	Setting
Enable	Enable the button to enable the alarm.	[How to set] Click Enable to enable. [Default value] OFF
Output Channel	If you check to set the Output Channel and the device is connected to an external alarm indicator, the alarm indicator signals when an alarm is triggered.	[How to set] Click to select an ID.
Alarm Record	Enable the button to enable the alarm record.	[How to set] Click to enable Alarm Record. [Default value] OFF
PTZ Type	Set PTZ type for dome cameras and select corresponding alarm name. The linkage alarm is enabled when an intrusion alarm is triggered.	[How to set] Select from the drop-down list.
Value	Select corresponding value from Value after select PZT type.	[How to set] Select from the drop-down list.

Step 3 Set deployment time.

Details please refer to 2.1 Step 4 Set deployment time.