



## **Quick Start Guide of AcuSense Solutions**

**HIKVISION AUSTRALIA PRODUCT TEAM**

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## Quick Start Guide of AcuSense Solutions

This quick guide shows you how to set up an accurate perimeter guarding system and how to configure functions properly for AcuSense solutions.

### 1. Basic introduction

In traditional surveillance system, all moving objects could trigger the perimeter guarding alarm, in which a large amount of false alarms are included. AcuSense is a new Hikvision deep learning algorithm which focuses on triggering alarm by detecting human and vehicle targets to considerably improve detection accuracy and reduce false alarm.

**Note:**

a, The aim of the system is to make alarms triggered by the right targets.

**b, AcuSense cameras don't support intrusion/line crossing detection and motion detection at the same time.**

**c, Continuous recording is recommended when cameras work in AcuSense mode.**

### 2. AcuSense Solutions

Hikvision has developed AcuSense camera and AcuSense NVR to make alarms triggered by the right targets. So we have two solutions:

**S1: AcuSense camera + AcuSense NVR**

S2: AcuSense camera + normal NVR



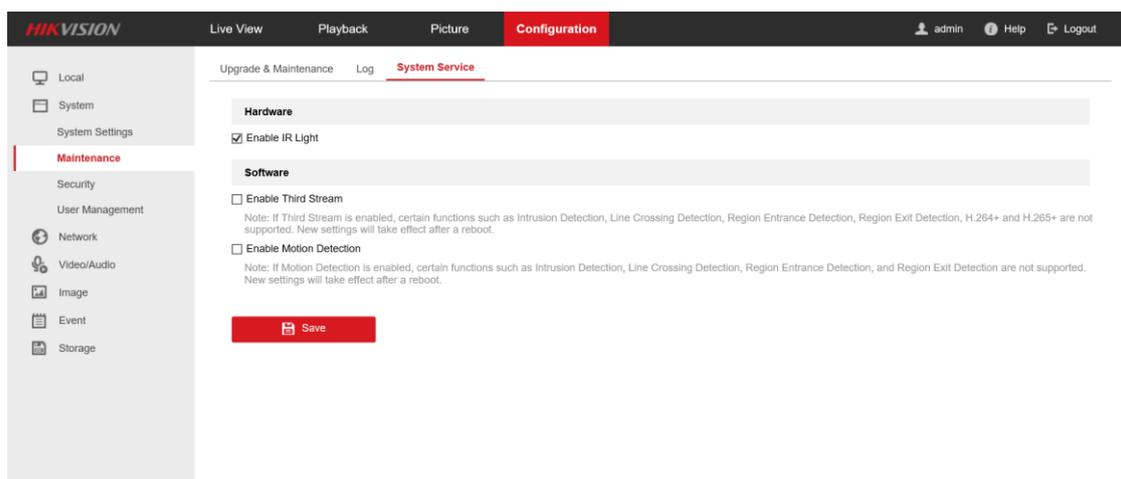
	pros	cons	remark
S1	All channels support AcuSense function & quick target search		<b>Recommended</b>
S2	Key channels support AcuSense function	1, Not support quick target search 2, Need log in camera's web page to configure AcuSense function	Based on NVR V4.1.64

## Comparison between two solutions

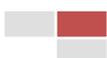
We do recommend S1 because it could have all channels AcuSense function and support quick target search. Besides, it is easy to configure functions in NVR local or web page.

### 3. AcuSense Solutions Configuration

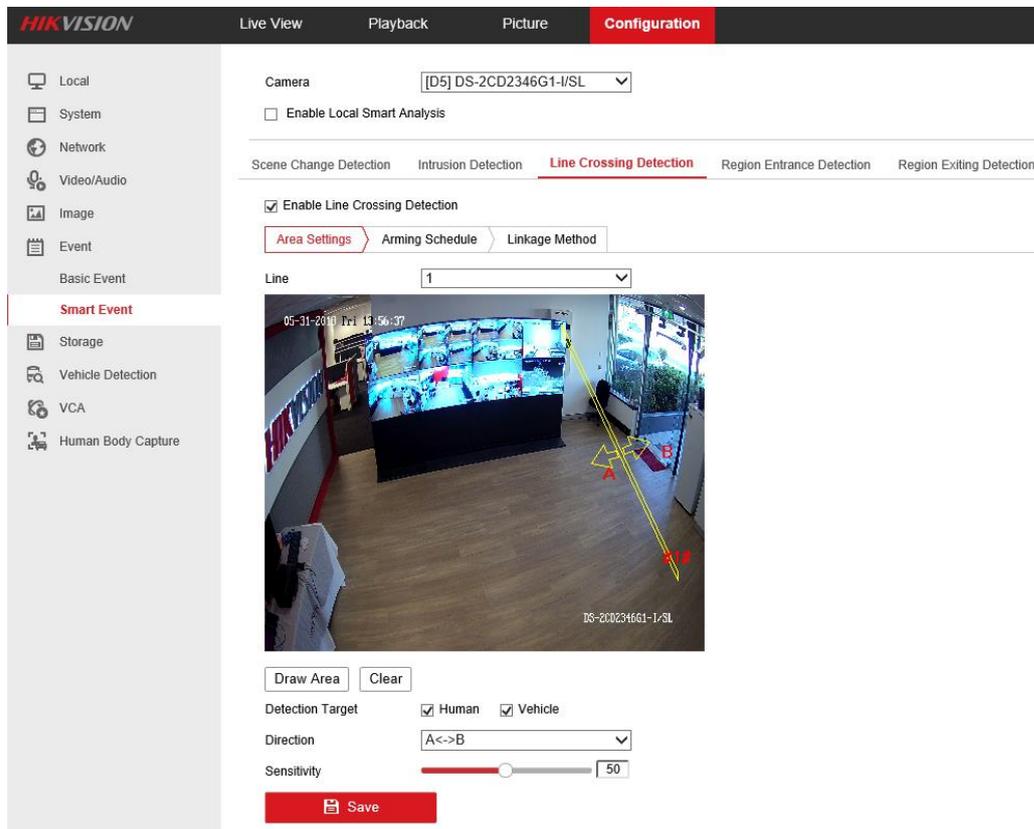
Since AcuSense camera don't support intrusion/line crossing detection and motion detection at the same time, make sure **Configuration-System-Maintenance-System Service** untick 'enable motion detection' (It is unticked by default).



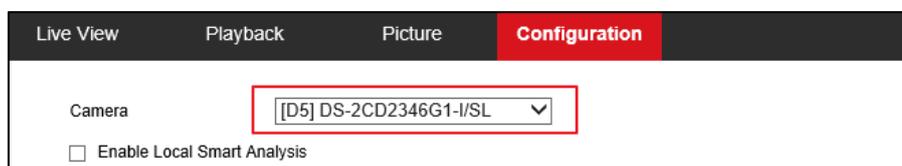
A, AcuSense camera+ AcuSense NVR



It is recommended to let AcuSense camera do AcuSense function which could save AcuSense NVR resource for normal IPC. Please make sure AcuSense camera channel untick 'Enable Local Smart Analysis'.

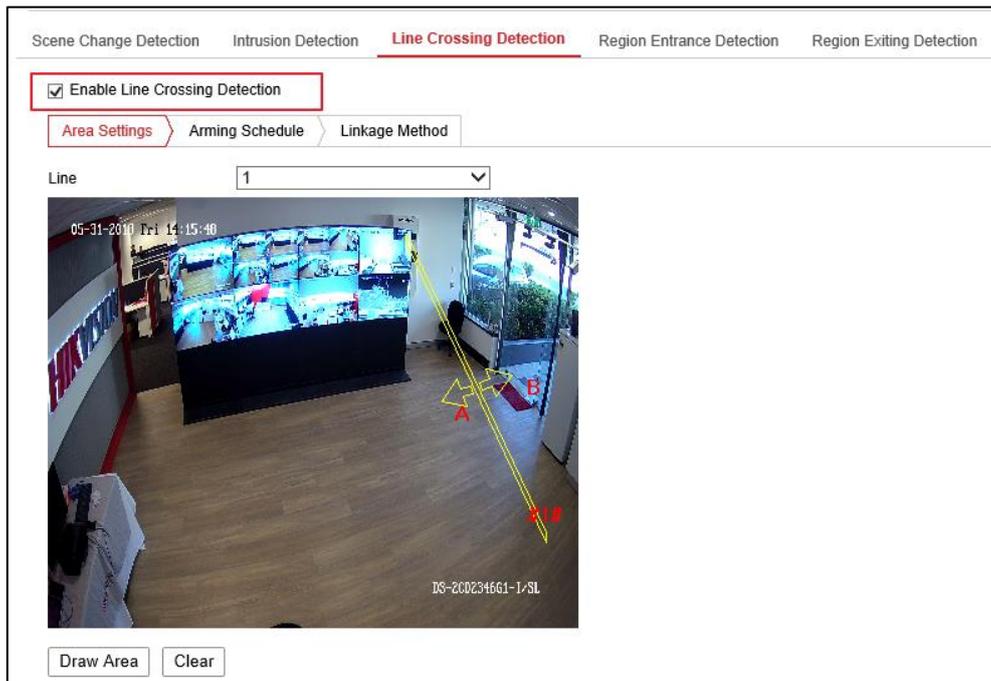


- 1) Go to NVR's web page, **Configuration—Event—Smart Event**, choose AcuSense camera channel.



- 2) Choose and enable event that you want to detect (line crossing, region intrusion, region entrance detection or region exiting detection), draw rules.





- 3) Choose detection target(s). There are three choices: **Human**, **Vehicle** or **Human& Vehicle**. Then click save. Once the detection target is enabled, AcuSense Camera will filter false alarms based on the algorithm automatically.

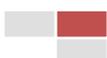
Detection Target	<input checked="" type="checkbox"/> Human	<input checked="" type="checkbox"/> Vehicle
Direction	A<->B	
Sensitivity	<input type="range" value="50"/> 50	

B, AcuSense IPC+ normal NVR

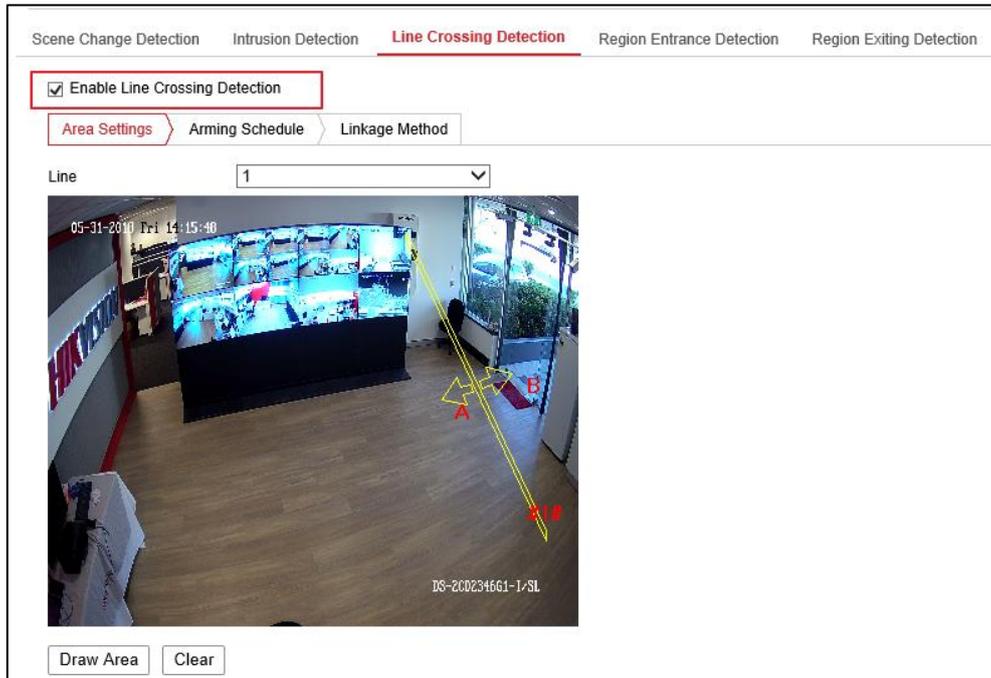
If NVR FW is V4.20 or above, configurations are just the same as **AcuSense camera+ AcuSense NVR**

If NVR FW is V4.1xx,

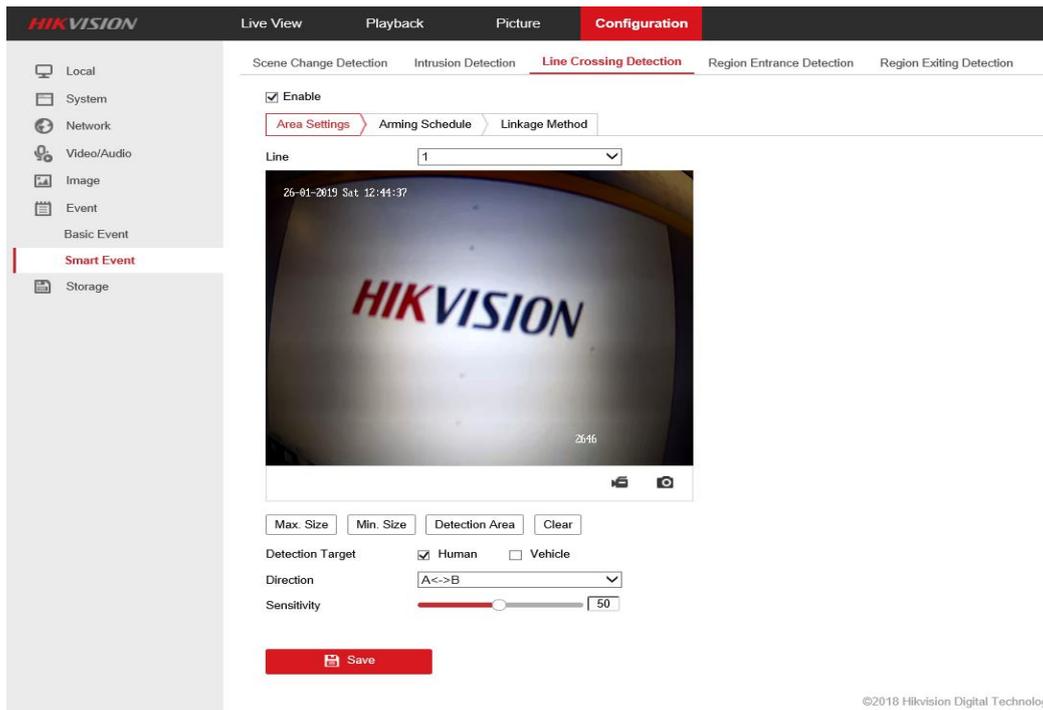
- 1) Go to NVR's web page, **Configuration—Event—Smart Event**, choose the AcuSense IPC channel.



- 2) Choose and enable event that you want to detect (line crossing, region intrusion, region entrance detection or region exiting detection), draw rules;



- 3) Go to IPC's web page, Check the target of interest. You can choose between 3 modes: **Human**, **Vehicle** or **Human& Vehicle**(default is human). Once the target detection is enabled, IPC will filter most of the false alarms based on the algorithm automatically.

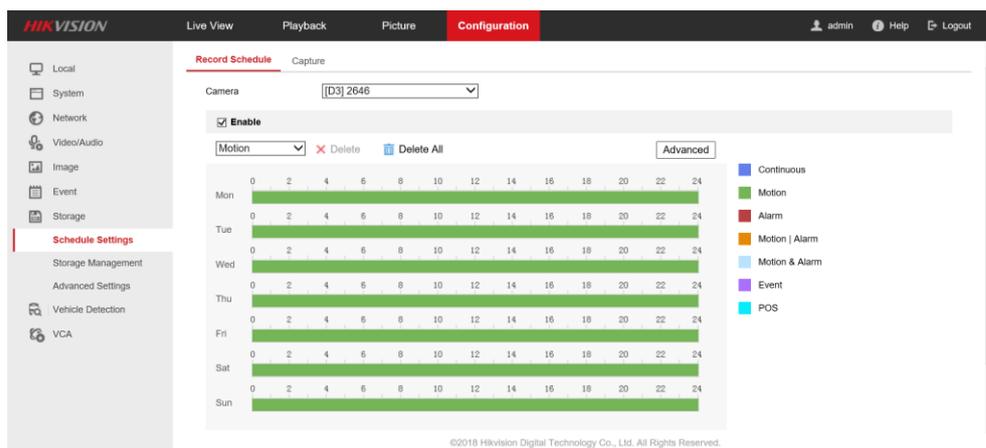


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## 4. Recording Configuration

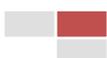
When using AcuSense IPC for AcuSense function, it doesn't support motion recording. Instead, **continuous recoding is recommended.**

- 1) Go to NVR's web page, **Configuration—Storage—Schedule Settings—Record Schedule,**



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## 5. Strobe Light and Audio Warning Configuration



If you have AcuSense camera with strobe light and audio warning (/SL model), you have to go to camera's web page to configure and enable strobe light or audio warning function.

1) Go to camera's web page, **Configuration**→**Event**→**Basic**

**Event**→**Flashing Alarm light Output**, you can set flashing duration from 1 to 60 seconds, choose flashing frequency low/medium/high, set brightness and arming schedule.

The screenshot displays the Hikvision web interface for configuring the 'Flashing Alarm Light Output' function. The interface is divided into several sections:

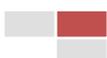
- Navigation Menu:** Located on the left, it includes options for Local, System, Network, Video/Audio, Image, Event, Basic Event (highlighted), Smart Event, and Storage.
- Configuration Tabs:** At the top, there are tabs for Live View, Playback, Picture, and Configuration (selected).
- Function Selection:** Under the Configuration tab, there are four sub-sections: Video Tampering, Exception, **Flashing Alarm Light Output** (highlighted), and Audible Alarm Output.
- Settings:** The 'Flashing Alarm Light Output' section contains:
  - Flashing Duration:** A text input field set to '15' with a unit of 's'.
  - Flashing Frequency:** A dropdown menu set to 'Medium'.
  - Brightness:** A slider control set to '50'.
- Arming Schedule:** A section with a 'Delete' button and a 'Delete All' button.
- Schedule Grid:** A 7-day grid (Mon-Sun) showing a 24-hour timeline. Each day has a blue bar indicating the alarm is active from 0 to 24 hours.
- Save Button:** A red button with a floppy disk icon and the text 'Save'.

2) Go to camera's web page, **Configuration**→**Event**→**Basic Event**→**Audio**

**Alarm Output**, there are 10 different alarm sound type you can choose.

You can set alarm time from 1 to 50 seconds and sound volume. The

maximum volume is 98dBspl at 0.1m, 78dBspl at 1m and 58dBspl at 10m.



The screenshot displays the 'Configuration' menu with 'Audible Alarm Output' selected. The 'Alarm Sound Type' is set to 'Siren', 'Alarm Times' is set to '5', and 'Sound Volume' is set to '100'. The 'Arming Schedule' section shows a 24-hour grid for each day of the week (Mon-Sun), with all hours currently selected. A 'Save' button is located at the bottom of the configuration area.

- 3) Go to camera's web page, in the linkage method, you can choose enable flashing arm or audio warning as you need.

The screenshot displays the 'Configuration' menu with 'Line Crossing Detection' selected. The 'Linkage Method' section is active, showing options for 'Normal Linkage' and 'Trigger Recording'. Under 'Normal Linkage', the following options are checked: 'Notify Surveillance Center', 'Flashing Alarm', and 'Audible Warning'. The 'Flashing Alarm' and 'Audible Warning' options are highlighted with red boxes.

## 6. Installation requirements

- a, The proposal altitude of Installation distance is 3 to 5 meters, equipment bow Angle is 10° or so, specific adjustments according to the environment.
- b, According to the number of millimeters of the lens, the maximum



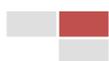
monitoring distance is different. The table of the maximum monitoring distance for the specific number of millimeters is as follows

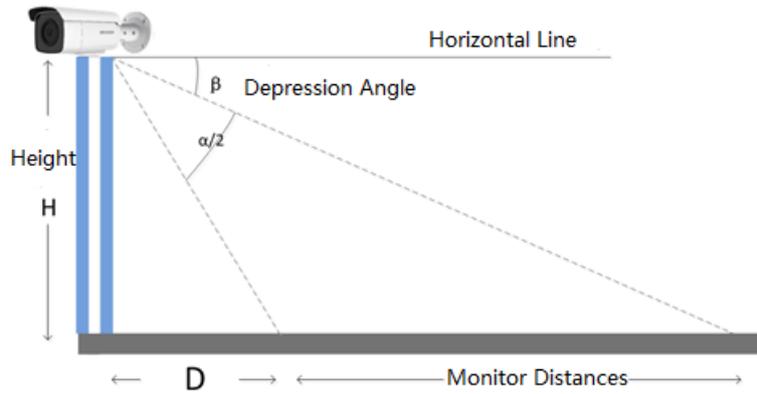
Lens(mm)	Recommended max monitoring distance
2.8 mm	10 m
4 mm	15 m
6 mm	22 m
8 mm	30 m
12 mm	40 m

- c, The monitoring area cannot be covered by nearby objects. Do not shoot backlight at the installation position, which will affect the image effect. The following picture is an installation sketch of the perimeter environment:



- d, The equipment installation needs to pay attention to certain blind area. The calculation method of blind area distance is as follows:





$$D = H \cdot \tan(90^\circ - \alpha/2 - \beta)$$

D: Camera monitoring blind area

H: Mounting height

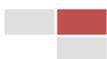
$\alpha$ : Vertical field Angle

$\beta$ : Angle of depression

Lens(mm)	Horizontal field Angle ( $\gamma$ )	Vertical field Angle ( $\alpha$ )	Blind area D (Height 3.3 m, Depression Angle 10°)
2.8 mm	109°	62°	3.7 m
4 mm	90°	48°	4.5 m
6 mm	53°	39°	5.6 m

e, Recommended Scenario:

- 1) Try to avoid getting too close. It recommends that the target be more than 3 meters away from the camera. For example, avoid the scene with lots of trees nearby;
- 2) If there is a mirror in the environment, the mirror image or shadow can easily lead to false alarm trigger;
- 3) Adjust the camera angle during installation to avoid interference from high brightness lights or headlights;



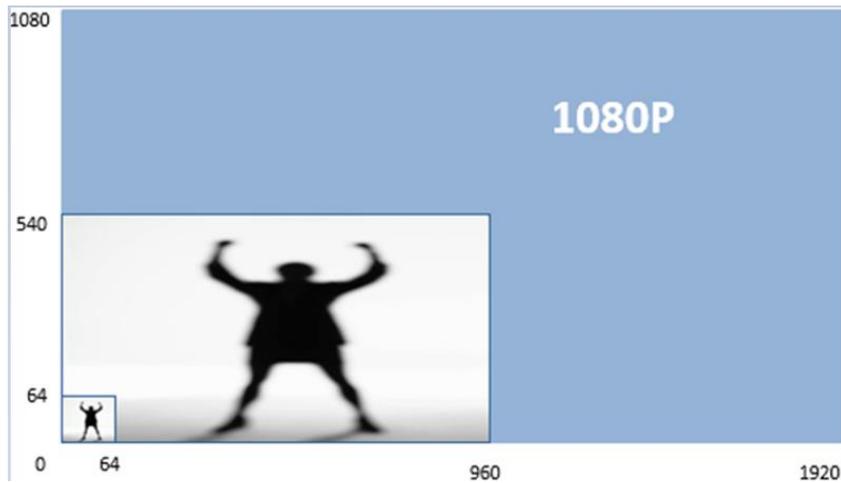
- 4) Dome are not recommended for outdoor scenes, IR reflect can seriously affect the accuracy of the alarm, as shown below:



- 5) The scene of heavy traffic will bring a lot of perimeter alarm, such as station, airport, theater, etc., so it is suggested to avoid this kind of scene;



- 6) Avoid situations where personnel targets are too large. AcuSense NVR can analyze the target size between  $1/16$  and  $1/2$  of the image's vertical size. For example, the camera's resolution is 1080p, and the vertical size of the target should be between 64 to 540 pixels.



In the following scene, the target takes up almost the whole picture. It is suggested to adjust the camera angle so that the camera can detect from a far distance, and the target size is in a suited size.



- 7) It is recommended to use the Region Entrance/Exiting Detection instead of Intrusion/Line Crossing Detection for region intrusion of fixed scenarios.

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