

# AI Perimeter Protection Solution

Based on Video Surveillance

**Galaxy**<sup>®</sup>



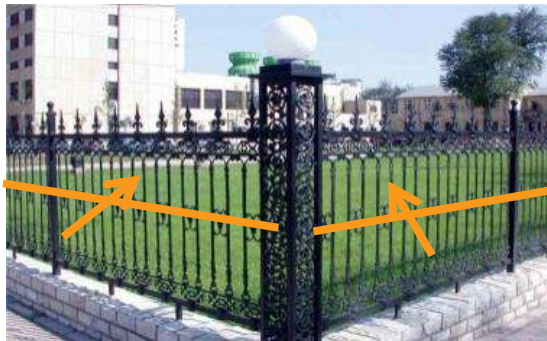
[www.galaxysecurityinc.com](http://www.galaxysecurityinc.com)

# Perimeter Protection Solution

Perimeter protection system refers to the fortifications built to either keep intruders out or to keep captives contained within the area the boundary surrounds.

## Monitoring Area

Plant perimeter, fence...



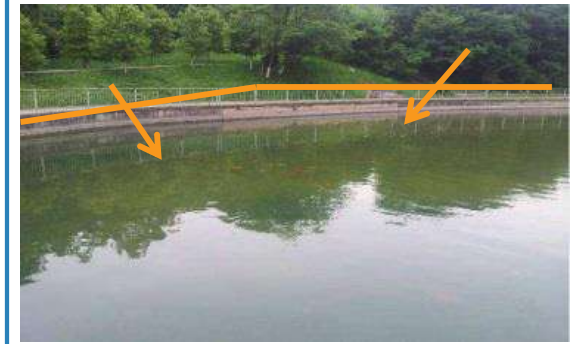
## Limited Access Area

No parking area, military base



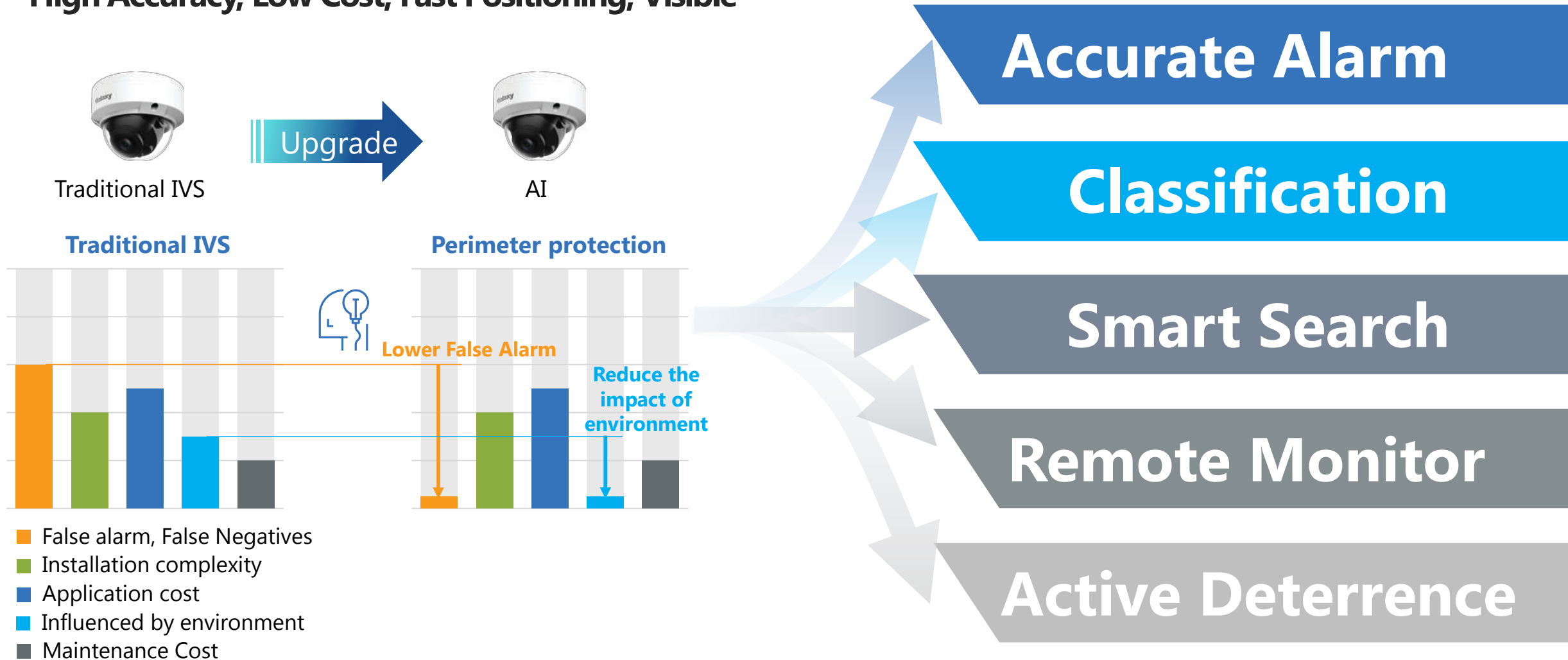
## Danger Area

Construction site, river bank



# AI creates value for Perimeter Protection System

**High Accuracy, Low Cost, Fast Positioning, Visible**




# Lower False Alarm & Negatives Rate

## Accurate Alarm


### <2% False Alarm Rate

Thanks to its advanced AI algorithms, the rate of false alarms triggered by small animals, tree movement, shadows, and bright lights to <2%. Significantly lower than traditional IVS solutions.

### False Alarm Rate in Testing Environment

Testing Environment	Test Results
Daytime, Night Testing distance: 40M~80M Installation height: 5.8M 	False alarm rate:  <b>&lt;2%</b>

### Detection Accuracy Rate in Testing Environment

Testing Environment	Test Results
<b>Daytime,</b> Testing Distance: 25M~70M Installation Height: 4M 	Detection accuracy rate of human and vehicle:  <b>95%~99%</b>

# Lower False Alarm Rate

Accurate Alarm

Traditional IVS    Perimeter protection



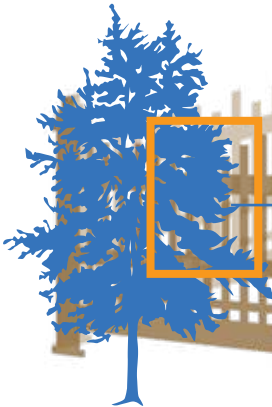
Traditional IVS    Perimeter protection



Traditional IVS    Perimeter protection



Bright light



Leaf movement

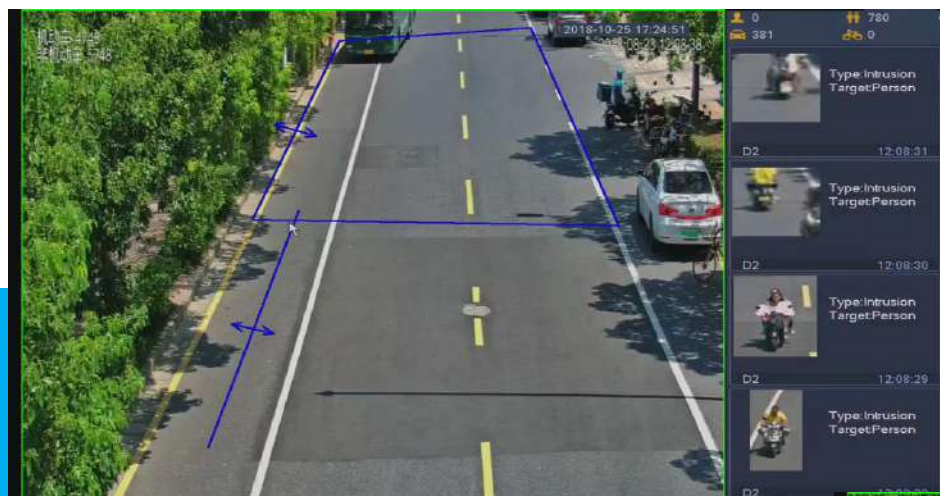


Animals



# Custom Perimeters based on Object Type

## Classification



**Human intrusion:** triggered only by human



**Vehicle intrusion:** triggered only by vehicle

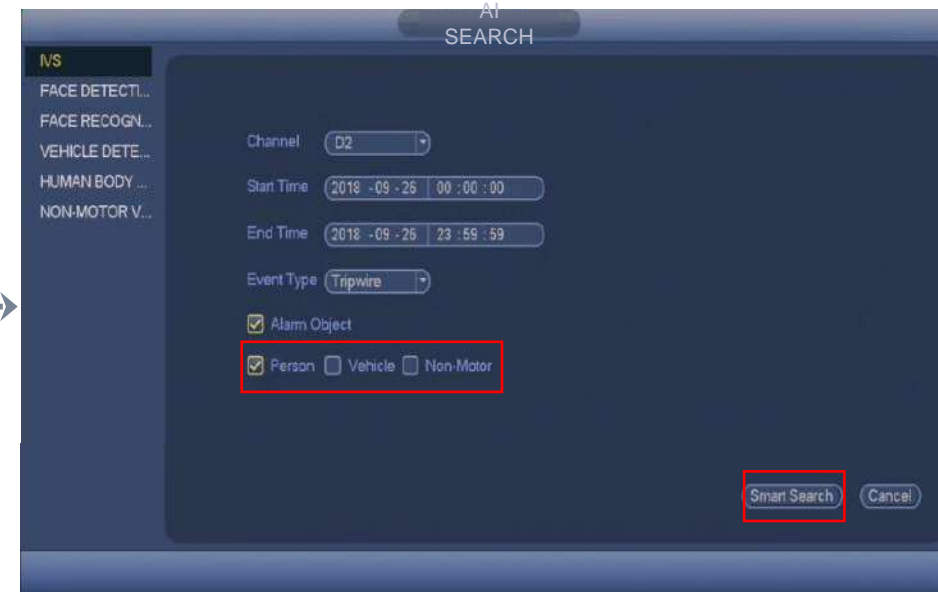
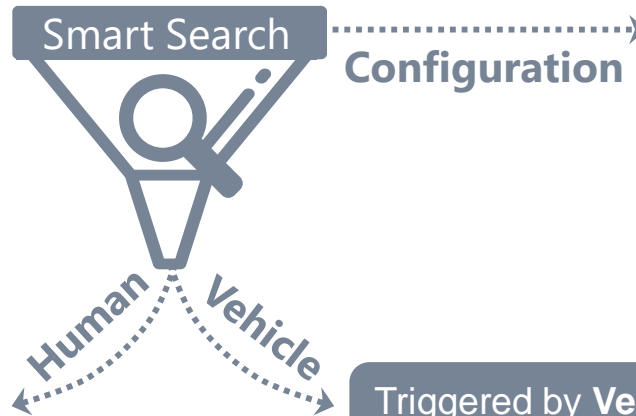
# Demo

## Perimeter protection

**Application Scenario:**  
Intrusion

# Search the video by Object Type

## Smart Search



### Triggered by Human



### Triggered by Vehicle



# Alarm Via VMS & Mobile App

## Remote Monitor



### Galaxy9000

- Real-time alarm push with target type
- Remote call to drive the intruders away



### DSS Express

- Real-time alarm push with target type
- Search alarm information by alarm type
- Alarm footages recording



# Active Deterrence

# Active Deterrence



Lakes



Remind pedestrians to leave the danger area as soon as possible

Lawn



Remind people not to trample the lawn

Entrance



Remind the thief that there is camera monitoring, let him leave

Perimeter



Remind the intruder that there is camera monitoring, let him leave

# Products & Solutions

# AI by Camera

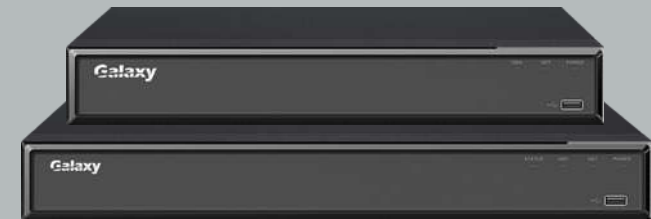
- ➔ Flexible and scalable
- ➔ Active Deterrence
- ➔ Full-color, Starlight+ products



Galaxy IPC Hunter AI Series

# AI by Recorder

- ➔ The most convenient way for upgrading old system
- ➔ Supports face recognition, can be compatible to access control system
- ➔ Compatible for third-party cameras



Galaxy Hunter AI Series DVRs

Galaxy Hunter AI 4K Series DVRs

# AI by Camera Solution

DSS Express

Galaxy Hunter  
Series NVR

Galaxy9000



Galaxy IPC Hunter AI series

## Application Scenes



House/Villa



Warehouse



Construction  
Site



Retail Store



Carport



Farm

...

## Product Selection

### Cameras



**4MP Starlight+ AI IPC**

GX-HT724A-AI-28/36  
GX-HT724AB-AI-28



**4MP Starlight+ AI IPC**

GX-HT744A-AI-28/36  
GX-HT744AB-AI-28  
GX-HT7154A-AI-28



**4MP Motorized AI IPC**

GX-HT784A-AI-Z  
GX-HT844A-AI-Z



**Color247 AI IPC**

GX-HT724-AI-LED-28CF  
GX-HT744A-AI-36C

### Storage

**GX-HT-NVR 8000 Series**

### VMS

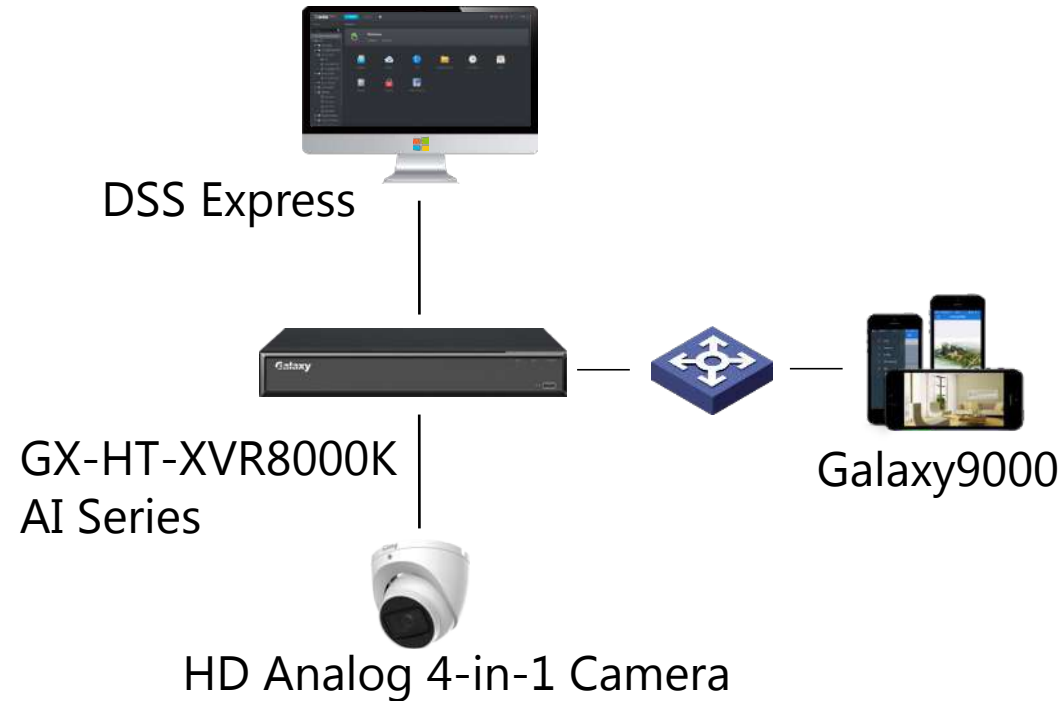
**DSS Express**

### Mobile App

ios: **Galaxy9000** 

Android: **Galaxy9000** 

# AI by Recorder Solution



## Product Selection

### 5MP

GX-HT-XVR8504K-AI  
GX-HT-XVR8508K-AI  
GX-HT-XVR8516K-AI

### 4K

GX-HT-XVR8504K-ST-AI  
GX-HT-XVR8508K-ST-AI  
GX-HT-XVR8516K-ST-AI

# Application Scenes

# Villa/House Perimeter

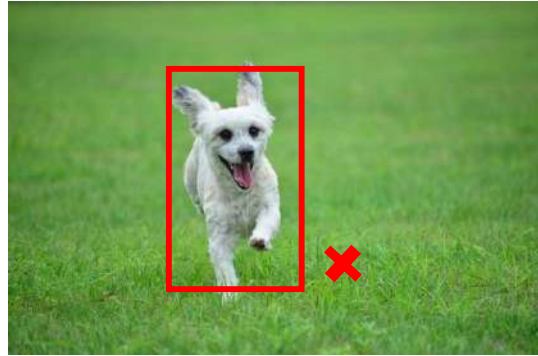
## Requirements & Challenges

### Vegetable plot and garden protection



Prevent theft of personal assets such as vegetables

### Filter animals' false alarms



Prevent frequent alarms caused by animals such as pets, birds, etc.

### Remote call



Active deterrence, alarm with voice and light to drive pedestrian away

### Private Parking Space Protection



When an alien vehicle stops in the private parking

## Advantages

**Active deterrence:** alarm with voice and light to drive intruders away

**Lower False Alarm Rate:** filter alarms triggered by animals

**Alarm messages push**

## Recommended Product



5MP Active Deterrence AI Camera  
GX-HT725A-AI-LED-28AD  
GX-HT845A-AI-LED-36AD *Coming Soon!*



GX-HT-NVR8000 Series

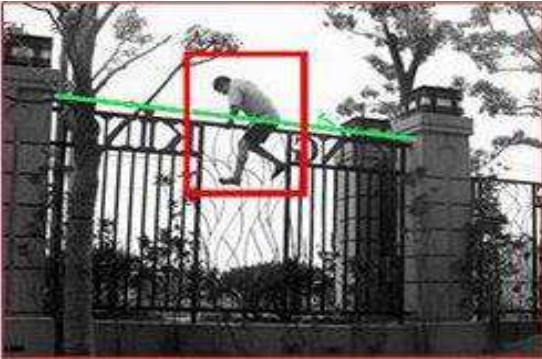


Galaxy9000

# Community/Park Perimeter

## Requirements & Challenges

### Crossing Fence Detection



The cameras are deployed on the periphery of the fence with a spacing of about 50M, to detect the crossing fence behavior

### Lower False Alarm



Filter the false alarm caused by moving leaves, pedestrians, light changes, etc.

## Advantages

**Accurate alarm:** report the intrusion and theft events timely

**Lower False Alarm Rate:** filter alarms triggered by animals

**Alarm messages push**

## Recommended Product

### New Project :



5MP Starlight+  
AI Camera  
GX-HT845A-AI-Z

*Coming Soon !*



GX-HT-NVR8000 Series



Galaxy9000



DSS Express

# Installation Guide

Please refer to the perimeter camera construction guide for detailed installation instructions

# Installation Requirements

## Applicable Scenes



Monitor the targeted person to intrude the obvious perimeters



Monitor people falling into water and entering rooftop and lawn

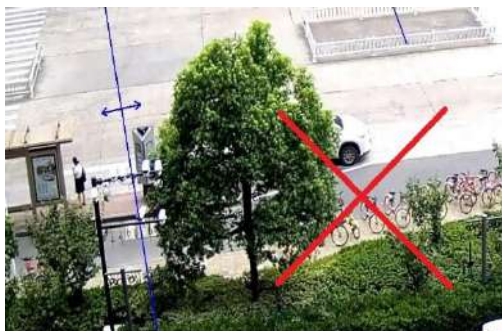


Monitor the completely split flow of people and vehicles



Monitor the intruder of small retail store in night

## Not Applicable Scenes



Trees around the tripwire interrupt the moving trail of targets

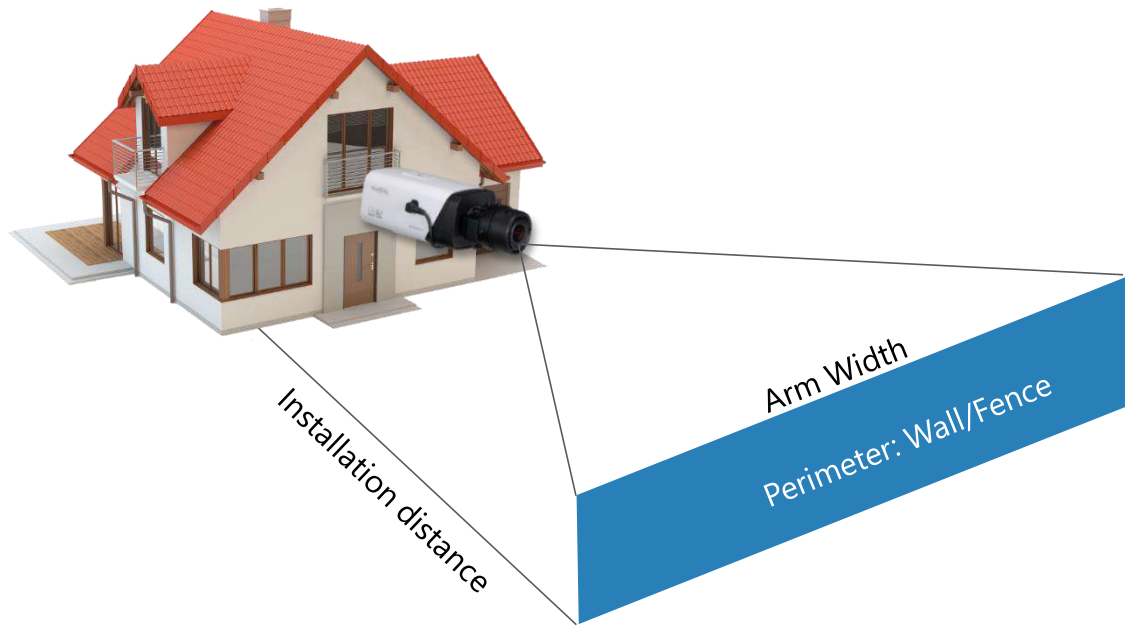


The brightness flickering influences the detecting results



In the dark, the detecting rate of color mode is low. You need to switch it to black-and-white mode

# Installing Camera at the Position Vertical to Perimeter



Recommended arm width for people: Around 16 m (max)

- If the installation distance is 5~22M: recommend 2.7~13.5mm lens
- If the installation distance is 28~90M: recommend 7~35mm lens

Recommended installation height:  $h > 3$  m, and the upper limit depends on the lens

## Suitable for Scenarios with short perimeter:

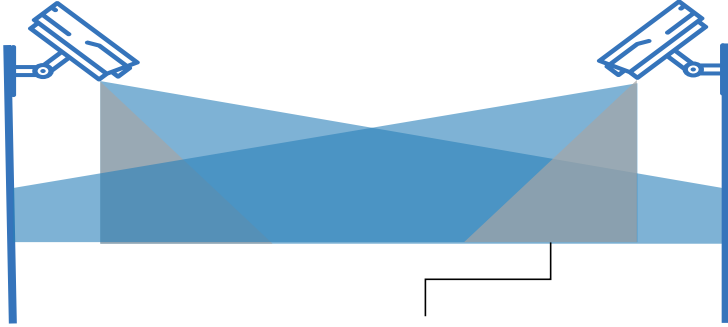
- > House/Villa
- > Warehouse
- > Retail store
- > Restaurant
- > Parking lot

...



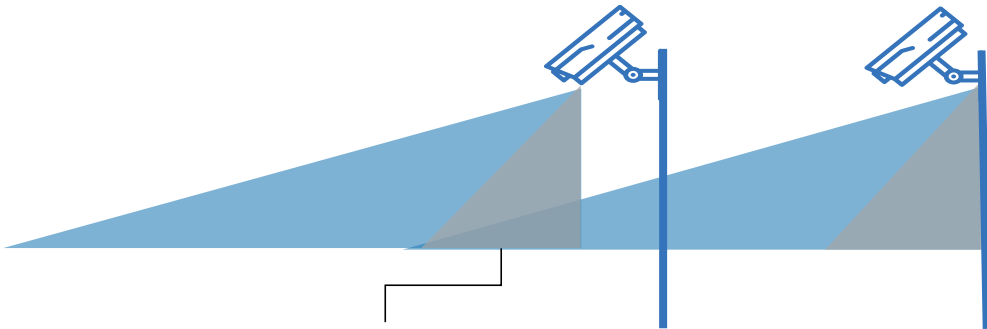
# Installing Camera above Perimeter

## Camera Placement - Correlation



The blind area is covered by the opposite camera.

## Camera Placement - Loop



The blind area is covered by the camera behind it.

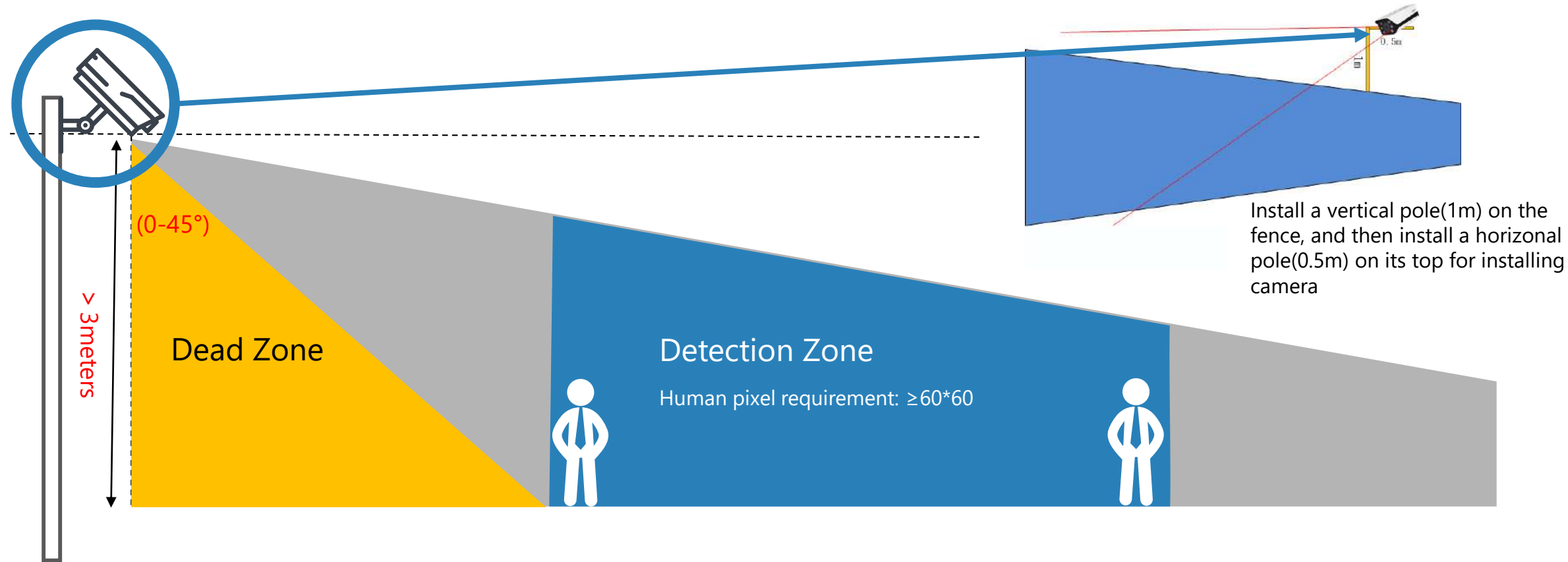
## Suitable for Scenarios with long perimeter:

- > Substation
- > Factory
- > School
- > Border
- > Prison

...



# Installing Camera above Perimeter



Recommended				
Focal Length	2.8mm	12mm	8mm	30mm
Arm Distance	1-6M	4-25M	3-17M	12-60M



# **Enabling a Safer Society and Smarter Living**

—— World Leading Video- Centric Smart IoT Solution & Service Provider

