EMI SYSTEMS
EMI Systems Ltd.
Protecting Your World

RADAR SECURITY

Accurately capture every movement



Dahua Technology

2019.12

CONTENTS



1

Product Introduction

Appearance, basic parameters, interface information, software platform, compatibility

2

Installation&Configuration

Installation of required support, supportable PTZ access/platform and web configuration process

3

Highlight Demonstration

Highlight function demonstration, real effect

4

Solution&Application

Introduction of typical application schemes and recommendation of application scenarios

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1.



Product Introduction

Appearance, basic parameters, interface information, software platform, compatibility

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Product Introduction

	PFR4K-E50	PFR4K-E120	PFR4K-D300	PFR4K-D450
Max. Target Number	64		32	
Detection Distance	**50m**	**Human: 120m Vehicle: 150m**	**Human: 300m Vehicle: 450m**	**Human: 450m Vehicle: 600m**
Detection Angle	Horizontal: 120° Vertical: 36°	Horizontal: 120° Vertical: 26°	Horizontal: 90° Vertical: 13°	
Max. Detection Speed	40km/h, continuous trajectory		80km/h, continuous trajectory	
Min. Detection Speed	0.17m/s, continuous trajectory		0.5m/s, continuous trajectory	
Distance Accuracy	±1m	±1.5m		
Angle Accuracy	±1°			
Max. Area Number	10			
Modulation Type	FMCW			
Scan Frequency	10Hz		8Hz	
Operating Frequency	24GHz			
Detection Target Type	Human and vehicle			
Detection Area(measured)	2016㎡	13822㎡	70650㎡	147975㎡
Radar+PTZ Smart Tracking	Supported on web manager			
Target Filtering	**Support, human and vehicle filtering**			
Channel Selections	**Support**			
Operating Temperature	-40℃~+70℃			
Real-time interactivity	Radar controls PTZ directly, low delay			
Casing	White, ADC12+PC			
Dimensions	204.9x157.9x67.1mm (8.07"x6.22"x2.64")		244.9x184.9x61.2mm (9.64"x7.28"x2.41")	
Weight	1.7kg(2.2lb)		2.0kg (4.41lb)	



Key Features

PFR4K Series



Product Introduction

24/7 DAY AND NIGHT

Working on all-weather conditions (darkness, heavy fog, rain, snow, etc.)

HIGH DETECTION ACCURACY

Low false alarm rate by adopting smart radar algorithm

WIDE DETECTION RANGE

Horizontal 90/120-degree, extra wide angle detection range

ACTIVE TAREGR DETECTION

Moving track display, PTZ cameras real-time monitoring; **Supporting human/vehicle target filtering**

SMART FRONT-END CONTROL

Support to link multiple DAHUA PTZ cameras to one radar or multiple radars to one PTZ camera, graded alarm set

CENTRALIZED MANAGEMENT

Configuration and management on DSS platform for radar-PTZ smart tracking system

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Product Introduction





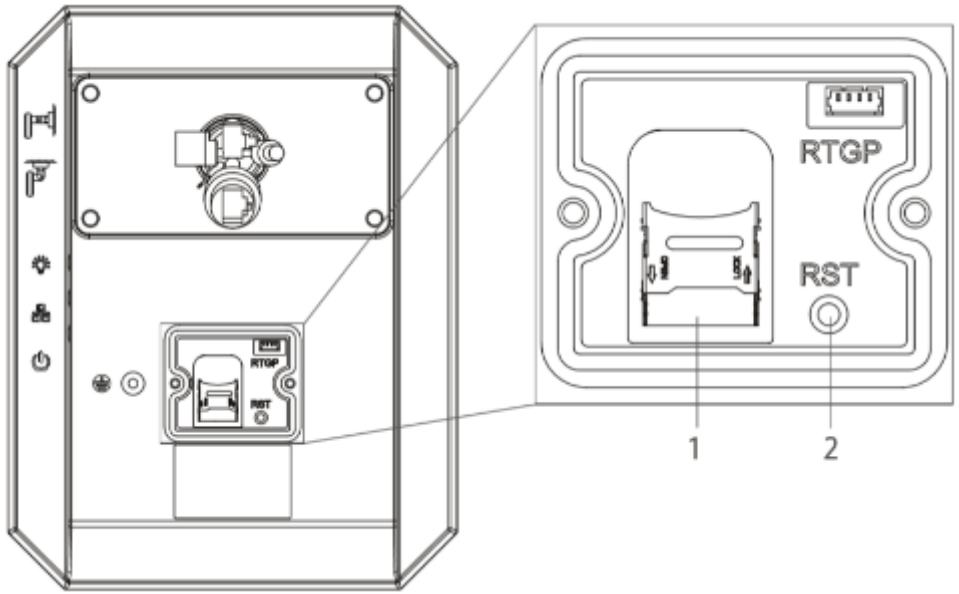




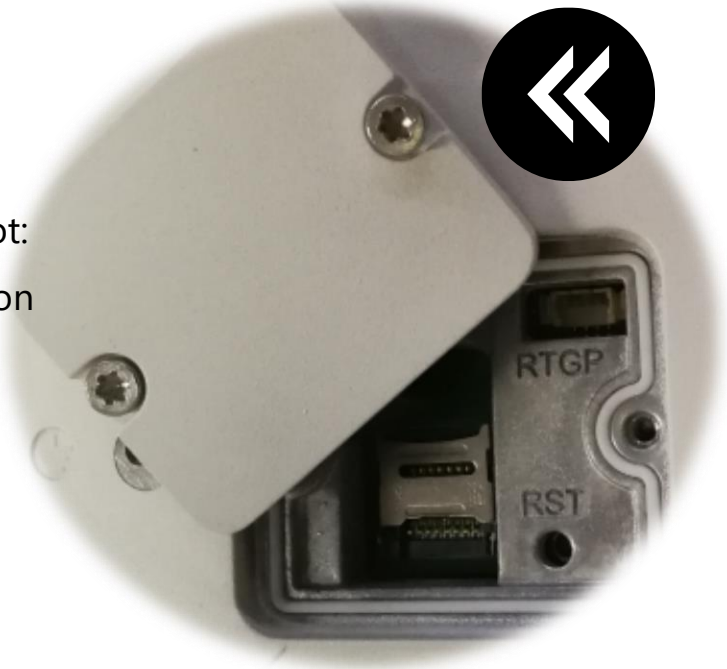
- Aesthetic design, strong appearance and simplicity of the design, generous
- IP67, IK09 protection class, suitable for more outdoor environment
- Function indicator light on the back for more convenient operation

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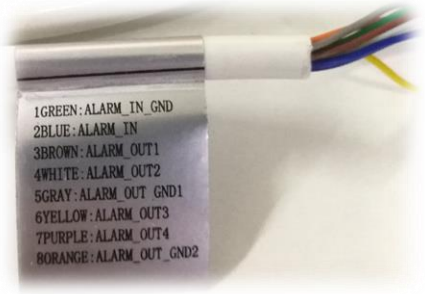
Product Introduction

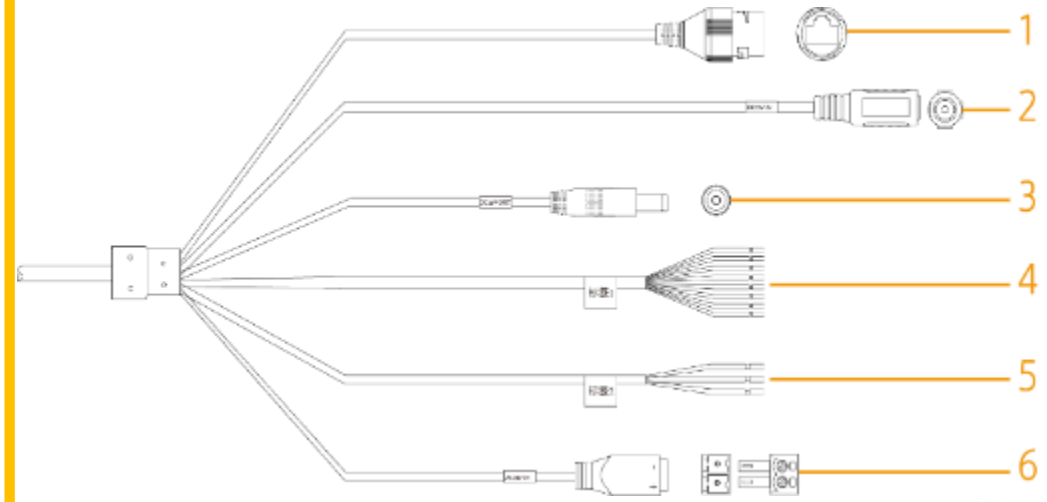


1. SD card slot:
2. Reset button



1. 1*RJ45: connect to a standard Ethernet cable, support POE power supply
2. 1*Power input: DC12V (±30%)
3. 1*Power out: DC12V, 0.165mA (PFR4K-D does not support)
4. Alarm port: 1 input, 5 output
5. 1*Power input: AC24V(±30%)





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2.



Installation&Configuration

Installation of required support, supportable PTZ access/platform and web configuration process

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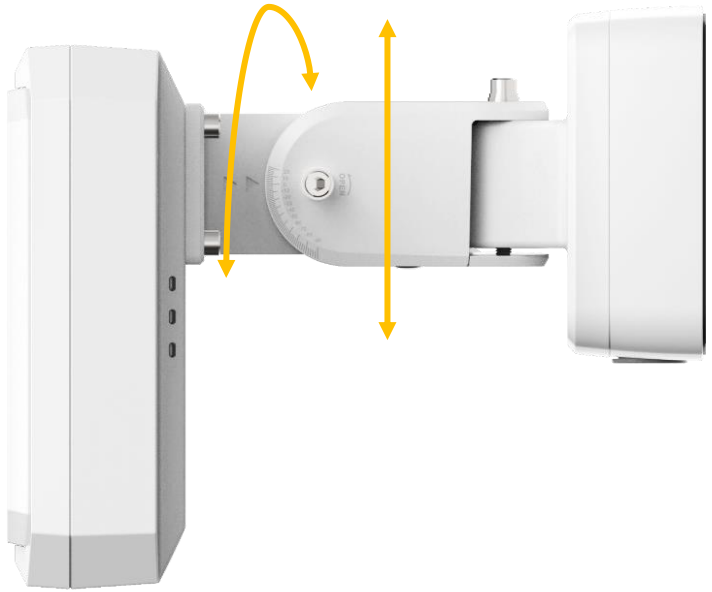
Installation Mode: PFB510W



Installation&Configuration

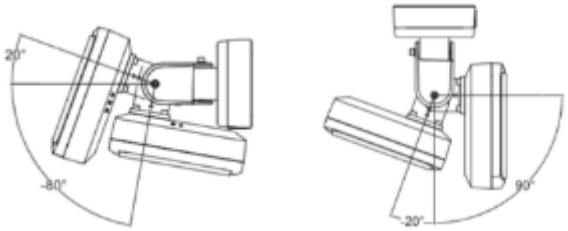
Easy to install

For the installation application of single radar, we designed an integrated mounting bracket, which has junction function and supports vertical / horizontal multi-angle adjustment.



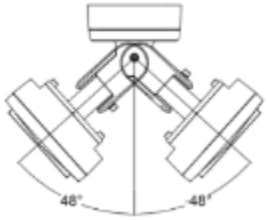
Pitch angles:

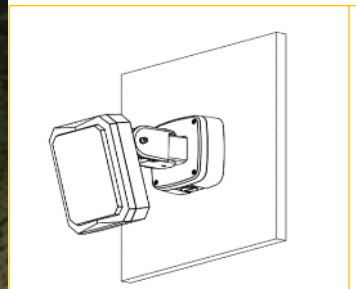
20° to -80°/-20° to 90°

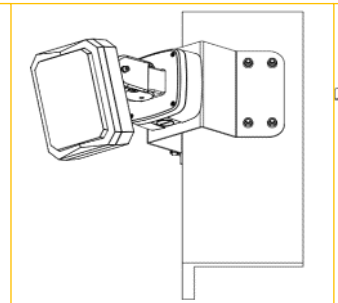


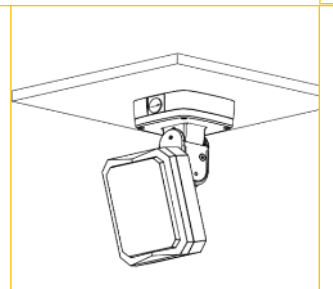
Horizontal angles:

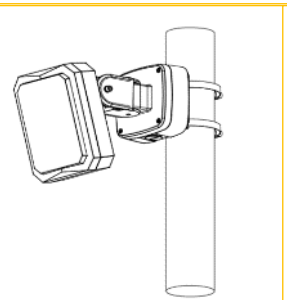
-48° to 48°

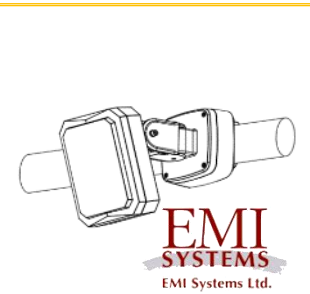




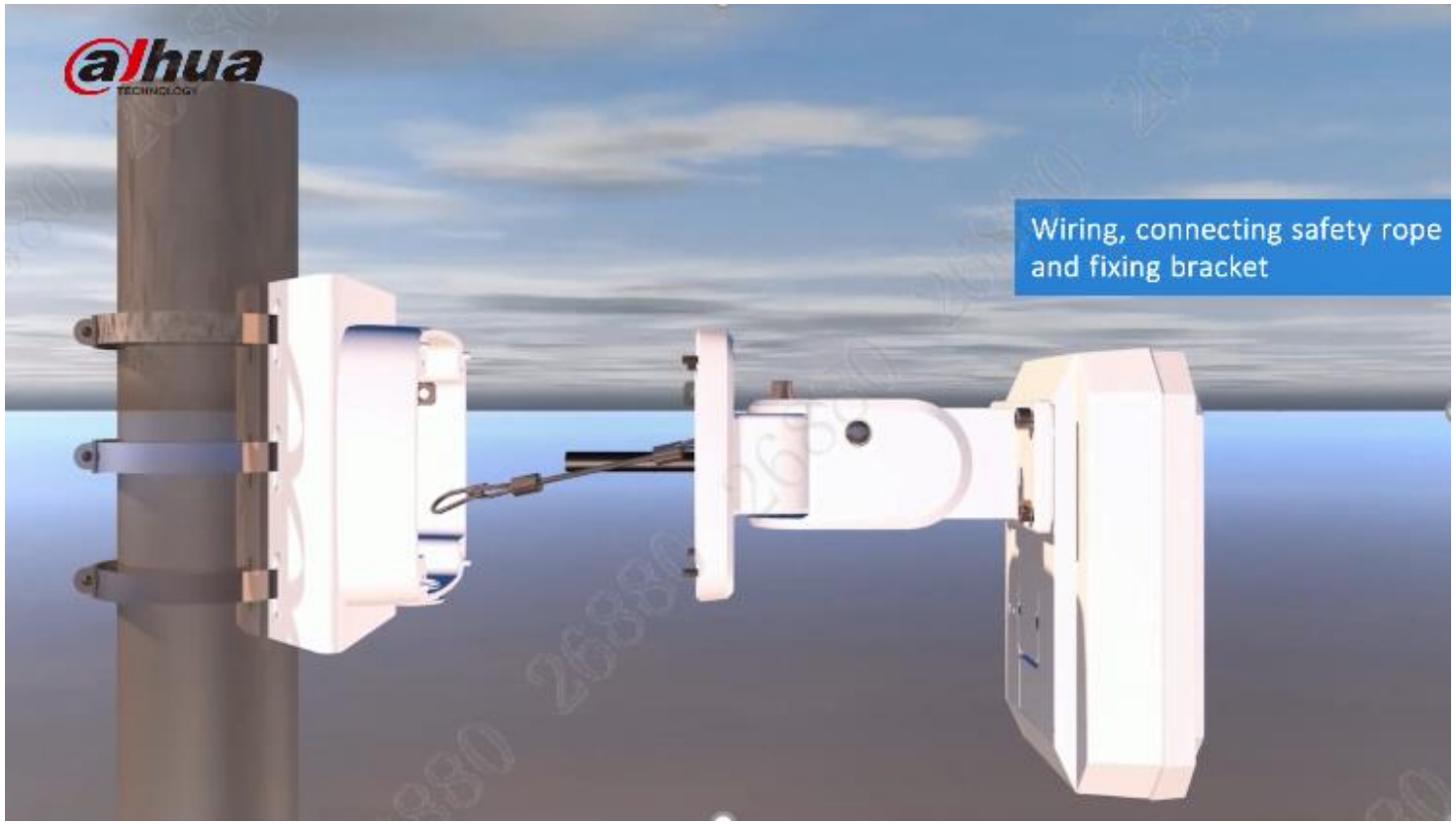








Installation&Configuration



For more information, please refer to the installation video!

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Configuration Mode

Login

(Modify IP address and configure other parameters as needed)

1

PTZ camera configuration

(only for radar PTZ tracking system)

2

Linkage guide:

3.1 Import a map

3.2 Configure radar position

3.3 Configure radar calibration

3.4 Configure radar calibration(only for radar speed dome tracking system)

3

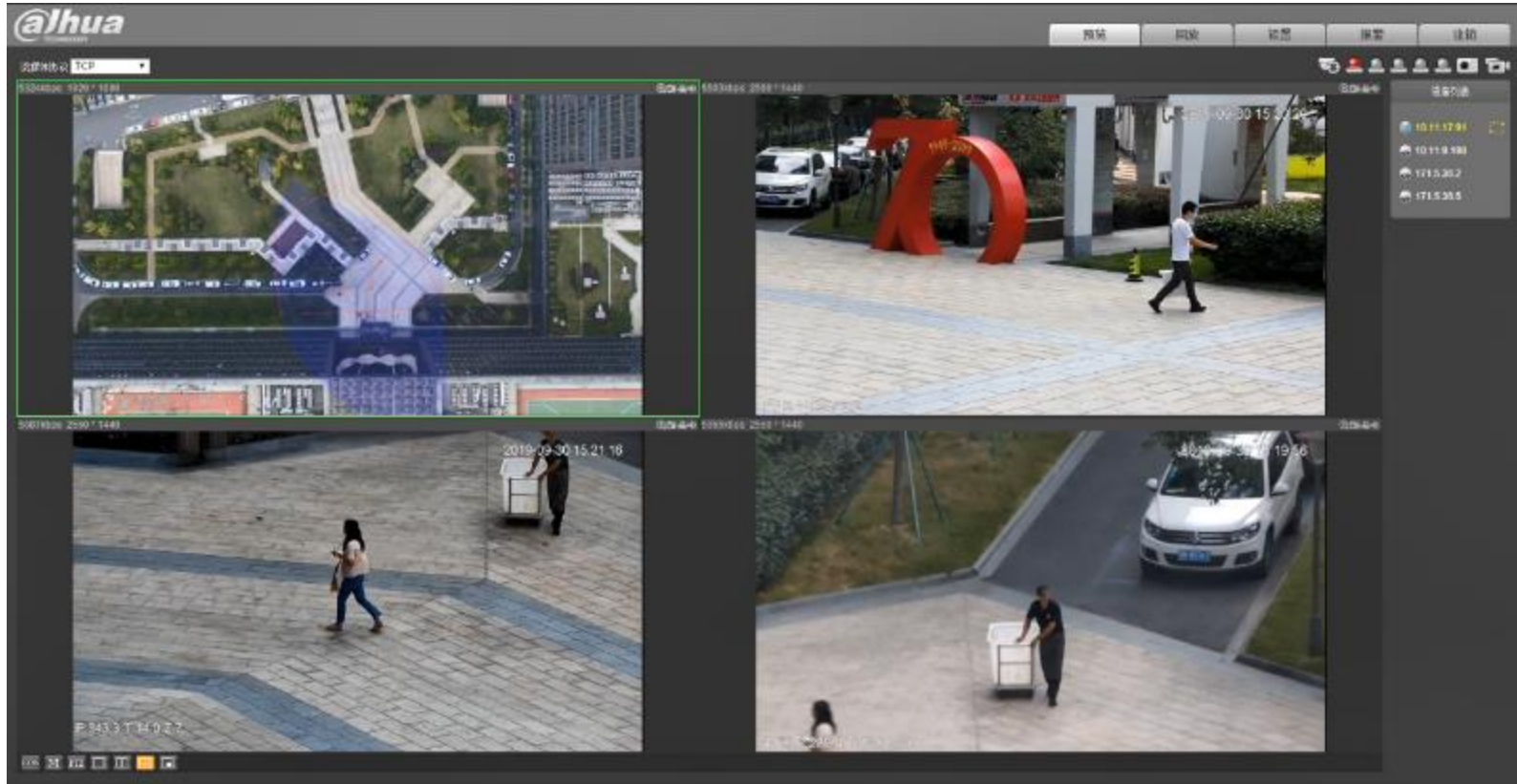
Region Management

- Alarm (red)
- Pre-warning (yellow)
- Shield (green)

4

Installation&Configuration

Smart Tracking





DAHUA radar is compatible with almost all DAHUA PTZ, and can be configured on the web and DSS Pro.

Compatibility

SD49425XB-HNR
SD49225XA-HNR
SD59430/59230/59225U-HNI
SD59232/432/425XA-HNR
SD5A425/445XA-HNR
SD6CE245/230/225U-HNI
SD6CE445XA-HNR
SD60430/230/225U-HNI
SD65F233XA-HNR
SD6AL245U-HNI(IR)
SD6AL233/445XA-HNR(IR)
SD6AL233XA-HNR(IR)
SD6AE233XA-HNI
SD8A840/440/240/820WA-HNF
SD8A840/440/240VI-HNI
SD10A248WA-HNF
PTZ83840-HNF-WA
PTZ19245U-IRB-N(-B)
PTZ1A225U-IRA-N

3.



Highlight Demonstration

Highlight, function demonstration, real effect

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Smart tracking

Target trajectory display and PTZ tracking, support multiple target tracking and multi-motion detection.

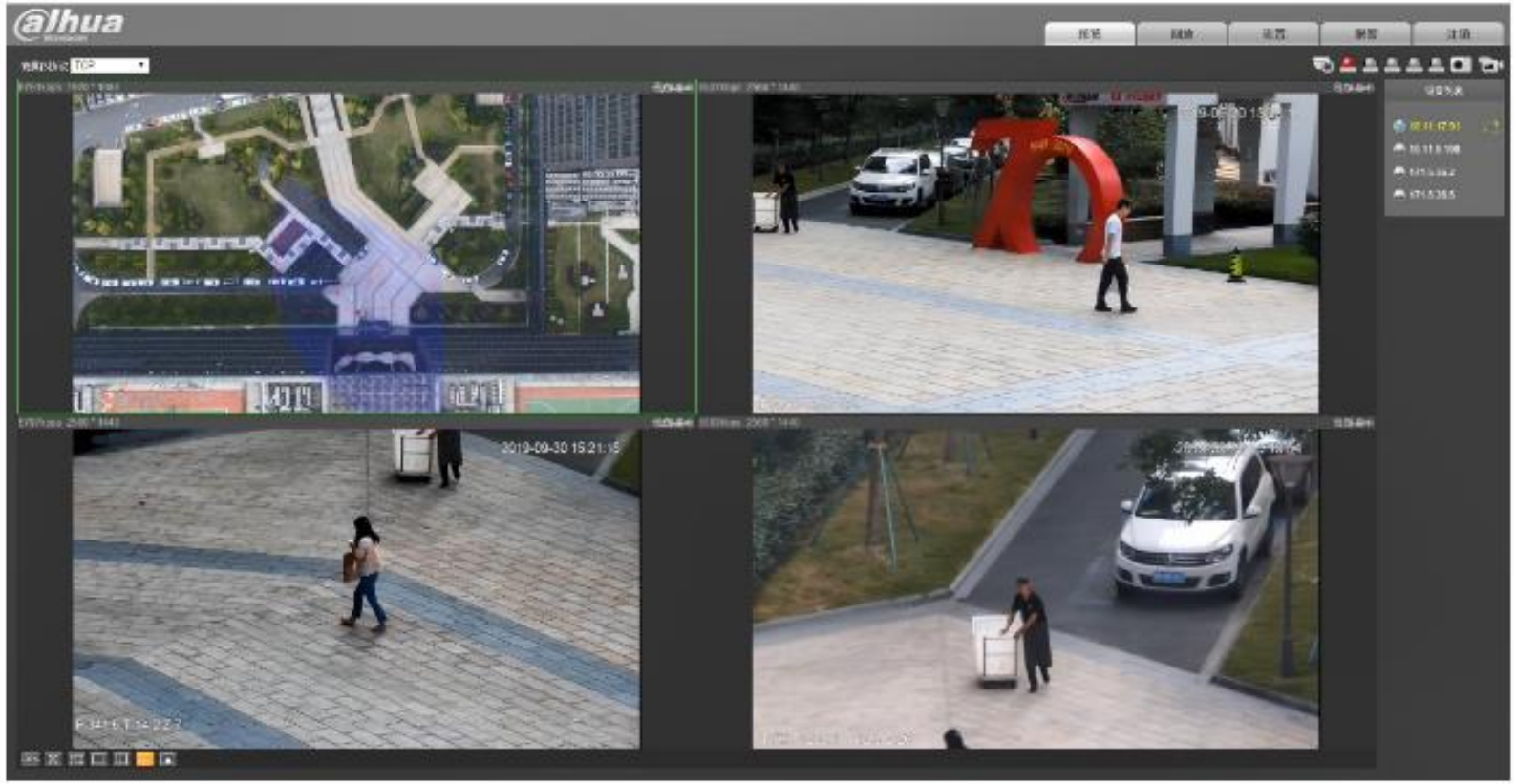




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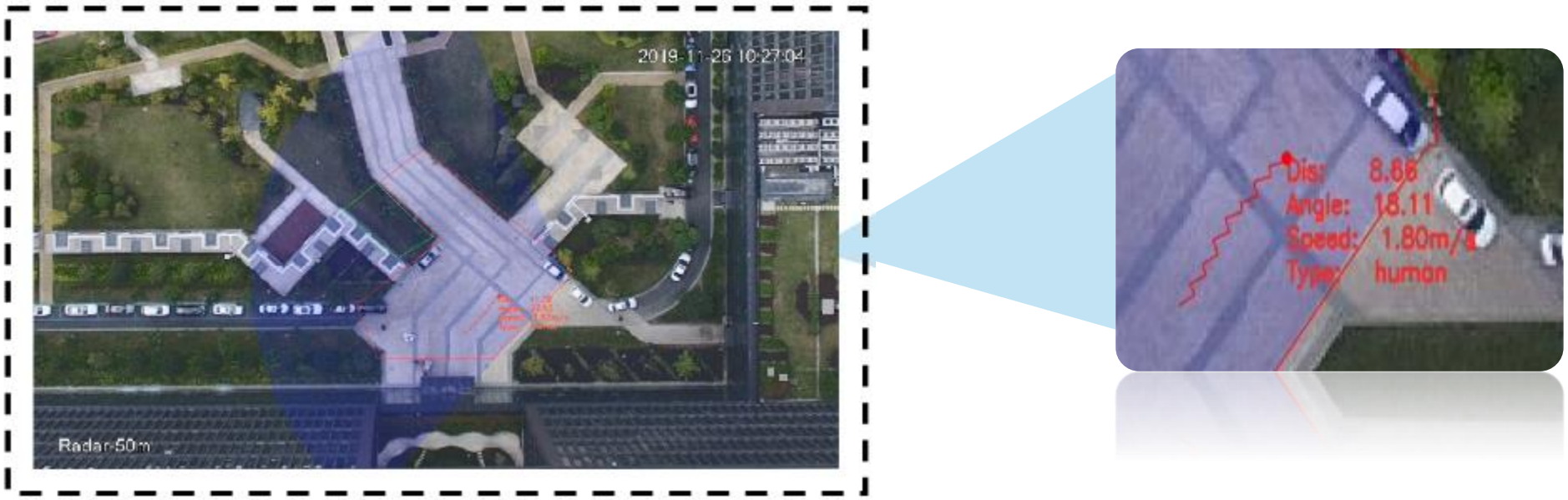
Radar with muti-PTZ linkage

Support multiple network PTZ cameras access and achieve multi-target simultaneous monitoring and tracking.



Video Metadata

Real-time display the distance and angle between dynamic target and radar, moving speed and identification of people and vehicles.



External equipment linkage

Support up to 5-channel alarm outputs, can allow the access of external devices of illuminator, horn and alarm to form an intelligent perimeter / area protection scheme.





4.



Solution&Application

Introduction of typical application schemes and recommendation of application scenarios.

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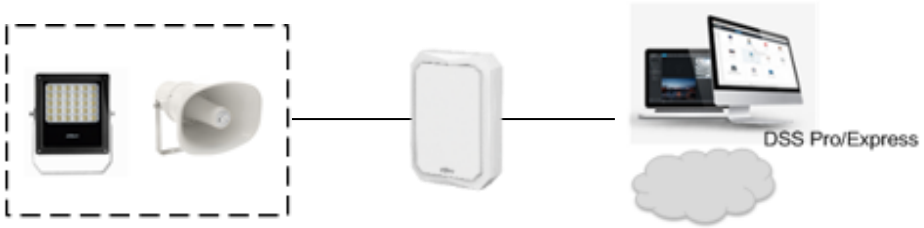
SOLUTION 1



RADAR ONLY

When radar is used alone, as a detector, the intrusion trajectory of the object will be displayed in the detection area. If the corresponding functional area (defense area, alarm area, shielding area) is set up on the web or platform, the corresponding function will be realized. For different application scenarios, the necessary peripheral equipment——horn or illuminator will be added. It can display special functions such as sound and light alarm.

The single radar scheme is suitable for regional protection and perimeter protection.



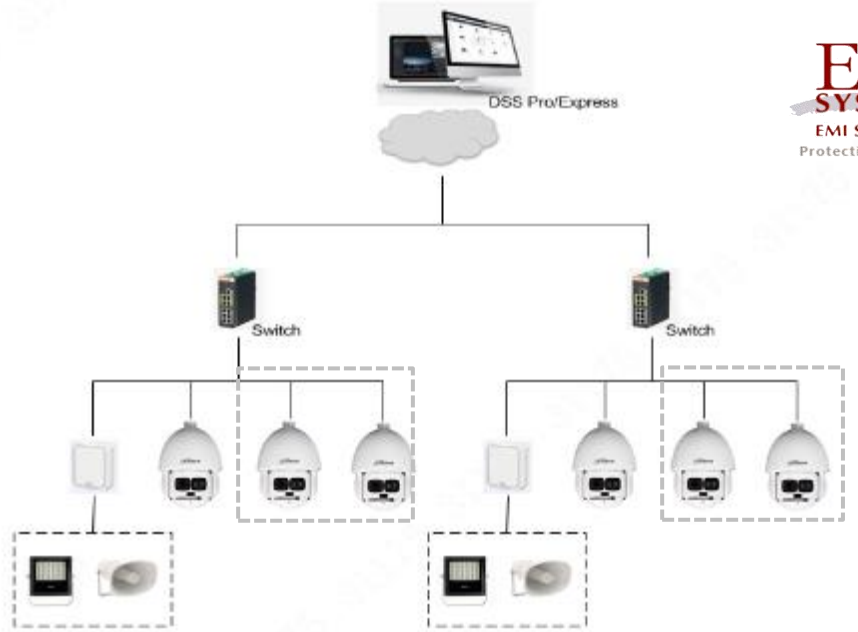


Solution&Application

SOLUTION 2







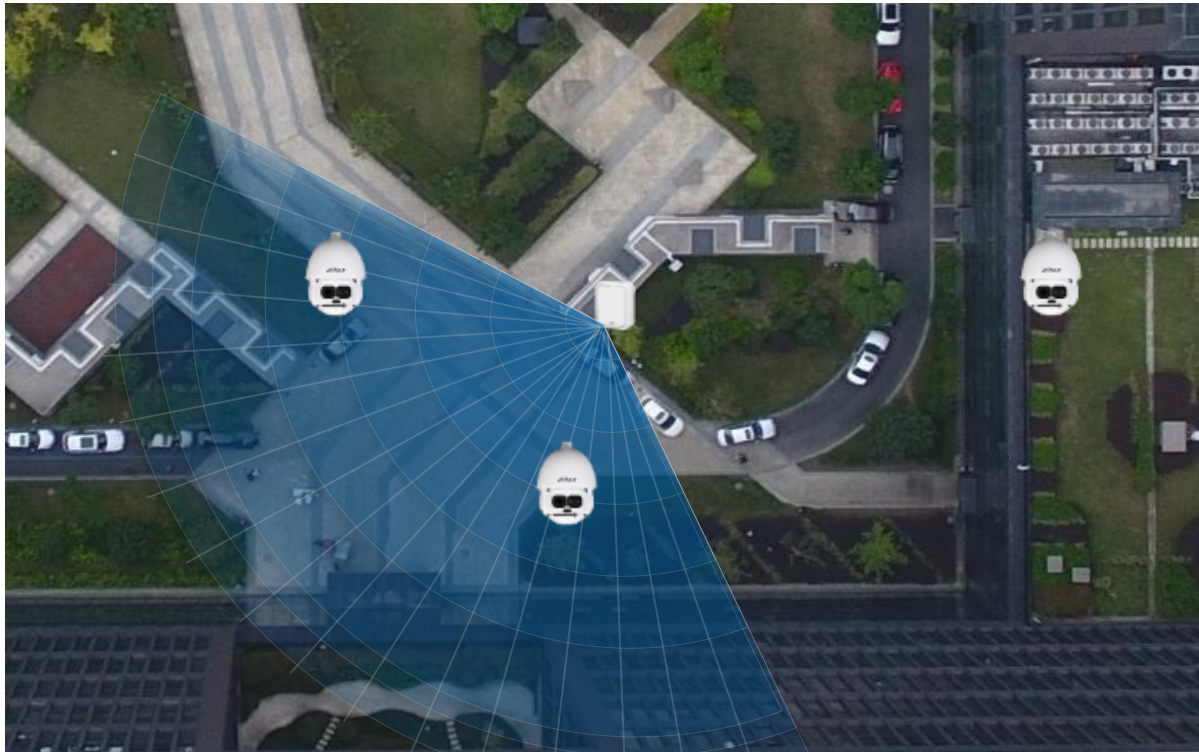
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Solution&Application

RADAR with MULTI-PTZ

The scheme of “one radar with multiple PTZ" is that multiple PTZ cameras can be invoked simultaneously in the defense area of a radar to carry out linkage tasks and realize specific business functions. Radar distributes control PTZ cameras according to different time and distance of target entering defense area, realizes PTZ cameras’ tracking and detail capture, and sets the alarm area or shielding area in defense area to realize special functions.

The scheme is very suitable for regional security protection, aiming at key areas, such as high-risk areas, high-value areas and private territories.

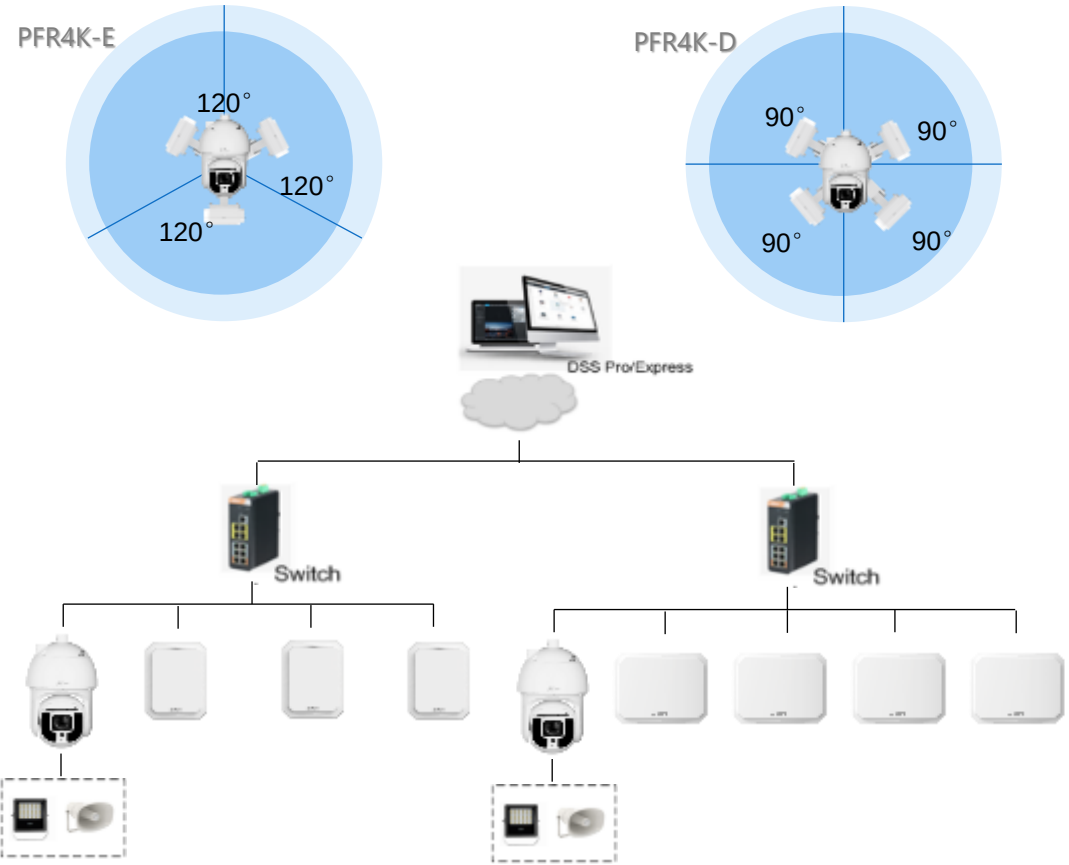


SOLUTION 3

Solution&Application







MULTI-RADAR with ONE-PTZ

The detection range of single radar is 90-degree or 120-degree, three or four radars are integrated into a 360-degree detection, and a 360-degree regional protection solution is composed of three radars and one PTZ camera, which realizes efficient regional protection function for some specific scenarios.



APPLICATION

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Solution&Application

High-risk areas



Explosion fields/Transformer substation

High-vale areas



Chemical warehouse/Parking lots/Airport

Upscale private areas



Upscale Park/ Private Beach Resort





THANKS

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