Dahua
TECHNOLOGY

DH-PFR4K-D450
450m Security Radar

- 24/7 all-weather
- Wide-range detection
- High accuracy
- Target filtering
- Radar-PTZ linkage
- Front-end PTZ control
- Centralized management
- Smart tracking
- IP67/IK10
- CE RED

24/7 All-Weather	Color Optical Defog	High Accuracy	Target Filtering	Radar-PTZ Linkage	Front-end PTZ Control
Centralized Management	Smart Tracking	CE RED	IK10	IP67	

System Overview

This security radar adopts 24 GHZ radar chip for 24/7 all-weather high-accuracy detection in the range of 450 m/90°. It supports radar-PTZ smart tracking, compatible with common Dahua speed domes. With radar detection and intelligent algorithms, ultra-low false alarms and zero missed alarms are achieved around the clock. Multiple PTZ cameras can be linked to one radar, and wide range global arming and detail tracking are realized simultaneously.

The product is widely applied to various perimeter and intrusion arming sites such as farms, prisons, airports, and oilfields to provide users with safer and more valuable security protection solutions.

Functions

K-band Detection
Adopt 24 GHz radar chip for detection with long distance, high accuracy, wide range, and 24/7 all weathers to realize ultra-low false alarms and zero missed alarms in armed regions.

Radar+PTZ Smart Tracking
Support linkage between radar and common Dahua speed domes. Multiple speed domes can be linked with one radar (link up to 3 speed domes on web manager, and up to 8 on platform). Both radar and cameras can be installed separately.

Multi Level Perimeter Protection
Support region setting with different alarm priority, external alarm linkage, human and vehicle filtering, and vehicle detection with low and medium speed.

Front-end PTZ Control
Low delay with radar directly controlling camera tracking. Display radar-PTZ linkage on web manager, and one radar can link with multiple cameras. Video stream acquisition, and map and trajectory display on NVR or platform is also supported.

Intelligent Algorithm of Radar
Support human and vehicle recognition.

Centralized Platform Management
Support configurations and management of multiple radars on the platform. Display radar-PTZ smart tracking on the map.

Protection and Certifications
Meet IP67 and IK10 protection grade, and CE RED standards.

Detector Series | DH-PFR4K-D450

Technical Specification

Performance

Max. Number of Targets	32
Detection Distance	Human: 450.0 m (1476.38 ft) Vehicle: 600.0 m (1968.50 ft)
Detection Angle	Horizontal: 90° Vertical: 13°
Max. Detection Speed	80 km/h, continuous trajectory
Min. Detection Speed	1.8 km/h, continuous trajectory
Distance Accuracy	± 1.5 m (± 4.92 ft)
Angle Accuracy	± 1°
Max. Number of Areas	10
Modulation Type	FMCW
Scan Frequency	8 Hz
Operating Frequency	24 GHz
Detection Target Type	Human and vehicle

Function

Radar+PTZ Smart Tracking	Supported on web manager
Track Mode	Tour, distance priority, and time priority
Region Setting	Alarm area, pre-warning area, and shield area
Target Filtering	Human and vehicle filtering
Record Mode	Manual record, scheduled record, and alarm record Record priority: Manual>Alarm>Scheduled
Restore to Factory Default	Restore to default settings with one click
Security	Authorized username and password, MAC address binding, HTTPS encryption, IEEE 802.1x, and network access control
Positioning	GPS, Glonass
Map Encoding	Yes

Network

Ethernet	RJ-45 (10Base-T/100Base-TX)
Protocol	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, and 802.1x
Interoperability	ONVIF Profile S&G, CGI
User Management	19
Storage	NAS; FTP; micro SD card (256 G)
Browser	IE: Versions later than IE7 Google: Versions earlier than Chrome45 Firefox: Versions earlier than Firefox46
Management Software	SmartPSS, DSS

Port

Alarm Input	1 channel (support 5V DC potential and 5mA current)
Alarm Output	5 channels (wet contact; support max 12V DC potential and max 300mA current)

Alarm Linkage	Snapshots, radar-PTZ linkage, SD card record, alarm triggering output, electronic map displaying, and email sending
Alarm Event	Radar alarm, no SD card, insufficient SD card storage, SD card error, network disconnection, IP conflict, full disk, and illegal access
SD Card	Yes
Indicator Light	Network connection: Yellow Running status: Red/Green Power: Green

Power

Power Supply	DC 12V (±30%), AC 24V (±30%), PoE (802.3at)
Power Consumption	Basic: 20W Max.: 24W

Environment

Operating Temperature	−40°C to +65°C (−40°F to +149°F)
Operating Humidity	≤95% (RH)
Storage Temperature	−40°C to +80°C (−40°F to +176°F)
Storage Humidity	≤95% (RH)
Protection Grade	IP67/IK10
ESD	Contact discharge: 6k Air discharge: 8k
Surge Protection Grade	Common mode: ± 6kV Differential Mode: ± 2kV

General

Product Color	White
Casing	ADC12+PC
Product Dimensions	244.9 mm × 184.9 mm × 61.2 mm (9.64" × 7.28" × 2.41")
Packaging Dimensions	328.0 mm × 146.0 mm × 278.0 mm (12.90"×5.75" × 10.95")
Net Weight	2.0 kg (4.41 lb)
Gross Weight	3.2 kg (7.06 lb)
Installation Method	Wall mount, ceiling mount, pole mount
Installation Height	3.0 m to 5.0 m (3.0 m recommended) (9.84 ft to 16.40 ft) (9.84 ft recommended)
Installation Position	Install separately

Certification

Certifications	CE: EN 50385; EN 55032; EN 55024; EN 55035; EN 50130-4; ETSI EN 301 489-1; ETSI EN 301 489-3; EN 60950-1 CE RED: EN 300440

Package Information

Security radar	1
Waterproof connector for network cable	1
Wrench	1
Quick start guide	1
Quality certificate	1
Legal and regulatory information	1
QR code label	1

Ordering Information

Type	Model	Description
Radar	DH-PFR4K-D450	450m security radar
Bracket	DH-PFB510W	Radar bracket, support wall mount and ceiling mount
	DH-PFA150	Pole mount bracket, support vertical or horizontal pole mount
	DH-PFA151	Corner mount bracket

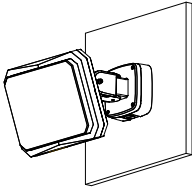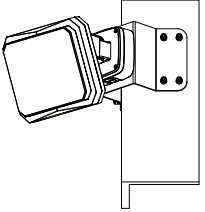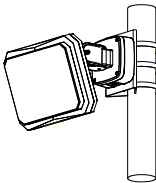## Accessories

Optional:

DH-PFB510W
Radar bracket
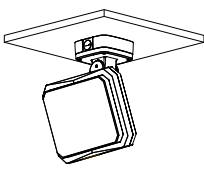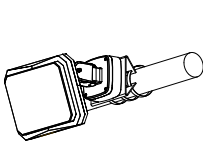
DH-PFA150
Pole mount bracket

DH-PFA151
Corner mount bracket

Installation

Ceiling Mount	Wall Mount	Corner Mount
DH-PFB510W	DH-PFB510W	DH-PFB510W+DH-PFA151

Pole Mount	
DH-PFA150+DH-PFB510W	
Vertical	Horizontal

Dimensions (mm[inch])

244.9 [9.64]
184.9 [7.28]
61.2 [2.41]
100.0 [3.94]
4-M6
44.0 [1.73]
M4

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