

DH-PFR4K-E50

50m 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/IK09
- FCC ID/CE RED



System Overview

Adopt 24 GHz radar chip for 24/7 all-weather high-accuracy detection in the range of 50 m/120°. Support radar-PTZ smart tracking, compatible with common Dahua speed domes. With radar detection and intelligent algorithms, ultra-low false positives and zero false negatives are achieved around the clock. Multiple PTZ cameras can be linked to one radar, and wide range global arming and detail tracking is realized simultaneously. The product is widely applied to various perimeter and intrusion arming sites such as villas, warehouses, 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 positives and zero false negatives 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

Intelligent algorithm is used to identify complex scenes and achieve high accuracy in different scenarios. Alarm is triggered once radar detection range is covered or radar is rotated substantially. Support human and vehicle recognition.

Centralized Platform Management

Support radar configurations and management of multiple radars on platforms. Display radar-PTZ smart tracking on the map.

Ingress Protection and Certifications

Meet IP67 and IK09 ingress protection, and FCC ID and CE RED standards.

Technical Specification

Performance

Max. Target Number	64
Detection Distance	Human: 50 m (164.04 ft) Vehicle: 50 m (164.04 ft)
Detection Angle	Horizontal: 120° Vertical: 36°
Max. Detection Speed	40 km/h, continuous trajectory
Min. Detection Speed	0.6km/h, continuous trajectory
Distance Accuracy	± 1 m (± 3.28 ft)
Angle Accuracy	± 1°
Max. Area Number	10
Modulation Type	FMCW
Scan Frequency	10 Hz
Operating Frequency	24 GHz
Transmission Power	<20dBm (100mW)
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
Environment Mode	General, shrub, and capacious
Target Filtering	Human and vehicle filtering
Channel Selections	Yes
Record Mode	Manual record, scheduled record, and alarm record Record priority: Manual>Alarm>Scheduled
Restore Default Settings	Restore default settings with one click
Security Mode	Authorized user name and password, MAC address binding, HTTPS encryption, IEEE 802.1x, and network access control
Power Output	Support 12 V DC power output with maximum 165mA current and 12 V voltage
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/Host	19
Storage	NAS; local PC; micro SD card (256 G)
Browser	IE: Versions later than IE7 Google: Versions earlier than Chrome45 Firefox: Versions earlier than Firefox46
Matched Platform	SmartPSS, DSS

Port

Alarm Input	1 channel (support 5V DC potential and 5mA current)
Alarm Output	4 channels (wet contact; support max 12V DC potential and max 300mA current) 1 channel (dry contact; support max 30V DC potential and max 2A current, and max 250V AC potential and max 2A current)
Alarm Linkage	Snapshots, radar-PTZ linkage, SD card record, alarm triggering output, and email sending
Alarm Event	Radar alarm, scene changing, no SD card, SD card capacity warning, 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: 10W Max.: 12W

Environment

Operating Temperature	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	≤95% (RH)
Storage Temperature	-40°C to +80°C (-40°F to +176°F)
Storage Humidity	≤95% (RH)
Ingress Protection	IP67/IK09
ESD	Contact discharge: 6k Air discharge: 8k
Surge Protection Grade	Common mode: ± 6kV Differential Mode: ± 2kV

Structure

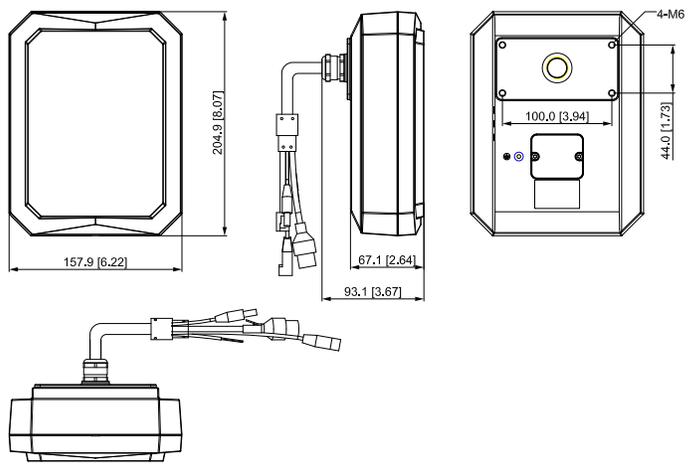
Color	White
Casing	ADC12+PC
Product Dimensions	204.9 × 157.9 × 67.1 mm (8.07" × 6.22" × 2.64")
Packaging Dimensions	256.0 × 208.0 × 171.0 mm (10.08" × 8.19" × 6.73")
Net Weight	1.7 kg (2.20 lb)
Gross Weight	2.2 kg (4.85 lb)
Installation Method	Wall-mounted, ceiling-mounted, pole-mounted
Installation Height	2.0 m to 4.0 m (3.0 m recommended) (6.56 ft to 13.12 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 FCC: FCC Part 15 Subpart B: 2018; ANSI C63.4: 2014 FCC ID: FCC 47 CFR Part 15C
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Ordering Information		
Type	Part Number	Description
Radar	DH-PFR4K-E50	50 m security radar
Bracket	DH-PFB510W	Radar bracket, support wall-mounting and ceiling-mounting
	DH-PFA150	Pole mount bracket, support vertical or horizontal pole mounting
	DH-PFA151	Corner mount bracket
Power Adapter	DH-PFM320D-015	Power adapter, DC12V/1.5A

Dimensions (mm/inch)



Accessories



DH-PFB510W
Radar bracket



DH-PFA150
Pole mount bracket



DH-PFA151
Corner mount bracket



DH-PFM320D-015
Power Adapter
DC12V/1.5A

Package Information

- Radar × 1
- Waterproof connector for network cable × 1
- Allen wrench × 1
- Quick start guide × 1
- Quality certificate × 1
- Legal and regulatory information × 1
- QR code label × 1

Wall Mount	Ceiling Mount	Corner Mount
PFB510W	PFB510W	PFB510W+PFA151
Pole Mount	Pole Mount	
PFB510W+PFA150	PFB510W+PFA150	