alhua
TECHNOLOGY

DH-IPC-HFW5241T-S
2MP WDR IR Bullet AI Network Camera

· 1/2.8" 2Megapixel progressive scan STARVIS™ CMOS

· H.265&H.264 triple-stream encoding

· 25/30fps@1080P(1920×1080)

· WDR(120dB), Day/Night(ICR), 3D DNR, AWB, AGC, BLC

· Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS

· 2.8mm fixed lens (3.6mm, 6mm, 8mm,12mm optional)

· Max. IR LEDs Length 80m

· Micro SD memory, IP67

Dahua AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc.The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

Pro AI series contains Face Capture, Perimeter Protection and People Counting functions.Powered by deep-learning Artificial Intelligence algorithms, significantly improved accuracy. Meanwhile, the series features starlight and smart IR technology. This series fully protected from dust and water, certified to IP67 standard.

Functions

Face Capture

Face capture is a software application that automatically captures faces from within a digital image or a video frame from a video source. Dahua cameras use advanced deep learning algorithms and are trained by a large number of face data sources, enabling the camera to locate faces quickly and accurately from the video source and capture facial images.

Face Attributes

Through the use of deep learning algorithms to analyze facial images, Dahua cameras can extract six facial attributes from each frame, including Age, Gender,Expression(Jolly/Surprise/Normal/Rage/Sad/Disgusted/Confused/Frightened), Glasses,Mouth Mask, Moustache & Beard. Customers can acquire data of interest via face attributes statistics.

Perimeter Protection

Dahua's Perimeter Protection functions significantly improved accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or to a mobile

client reduces system requirements and resources resulting in greater surveillance system efficiency.

People Counting

People Counting function uses advanced image processing technology to capture depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals' entrance and exit with up to 95% counting accuracy.

Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. Dahua face detection camera can extract six facial attributes and output the metadata for analysis.

Protection(IP67, wide voltage)

The camera allows for ±30% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67) , the camera is the choice for installation in even the most unforgiving environments.

ONVIF

Technical Specification

Camera

Image Sensor	1/2.8" 2Megapixel progressive scan STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V)
RAM/ROM	512MB/128MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s
Minimum Illumination	0.002Lux/F1.6 (Color,1/3s,30IRE) 0.012Lux/F1.6 (Color,1/30s,30IRE) 0Lux/F1.6 (IR on)
IR Distance	Distance up to 80m (262ft)
IR On/Off Control	Auto/ Manual
IR LEDs	4

Lens

Lens Type	Fixed
Mount Type	Board-in
Focal Length	2.8mm,3.6mm,6mm,8mm,12mm
Max. Aperture	F1.6(2.8mm~8mm),F2.0(12mm)
Angle of View	H: 106°, V:57°/H: 87°, V:46°/H: 53°, V:30°/ H: 41°, V:23°/H: 26°, V:14°
Optical Zoom	N/A
Aperture Type	Fixed
Close Focus Distance	0.6m(1.97ft)/1.2m(3.94ft)/2.5m(8.20ft)/ 4m(13.12ft)/8.6m(28.22ft)

	Lens	Detect	Observe	Recognize	Identify
	2.8mm	39m(128ft)	15m(49ft)	8m(26ft)	4m(13ft)
	3.6mm	55m(180ft)	22m(72ft)	11m(36ft)	6m(20ft)
DORI Distance	6mm	83m(272ft)	33m(108ft)	17m(56ft)	8m(26ft)
	8mm	110m(361ft)	44m(144ft)	22m(72ft)	11m(36ft)
	12mm	172m(564ft)	69m(226ft)	35m(115ft)	17m(56ft)

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan:0˚~360˚; Tilt:0˚~90˚; Rotation:0˚~360˚

Artificial Intelligence

Face Capture	Support face image capture
Face Attributes	Support 6 kinds of face attributes extraction: Age, Gender,Expression(Jolly/Surprise/Normal/ Rage/Sad/Disgusted/Confused/Frightened), Glasses,Mouth Mask, Moustache & Beard
Perimeter Protection	Tripwire, Intrusion(Human & Vehicle classification)
People Counting	Line crossing people counting, Region people counting

General Intelligence

Event Trigger	Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access,Storage anomaly
General Intelligence	Object Abandoned/Missing

Video

Compression	H.265+/H.265/H.264+/H.264/H.264B/H.264H/ MJPEG(sub stream)
Streaming Capability	3 Streams
Resolution	1080P(1920×1080)/1.3M(1280×960)/ 720P(1280×720)/D1(704×576/704×480)/ VGA(640×480)/CIF(352×288/352×240)
Frame Rate	Main Stream: 1080P(1~25/30fps) Sub Stream: D1(1~25/30fps) Third Stream: 1080P(1~6fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32~ 8192Kbps H.265: 19~ 7424Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detetion	Off / On (4 Zone, Rectangle)
Region of Interest	Off / On (4 Zone)
Electronic Image Stabilization (EIS)	N/A
Smart IR	Support
Defog	Support
Digital Zoom	N/A
Flip	0°/90°/180°/270°
Mirror	Off / On
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

Compression	N/A

Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP;SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; SNMP;QoS; UPnP;NTP
Interoperability	ONVIF(Profile S/Profile G), CGI,Milstone,Genetec,P2P
Streaming Method	Unicast / Multicast
Max. User Access	20 Users
Edge Storage	NAS FTP Mirco SD card 256GB
Web Viewer	IE(versions newer than IE8), Chrome, Firefox, Safari(versions newer than Safari 12)
Management Software	Smart PSS, DSS, P2P
Smart Phone	iOS, Android

Certifications

Certifications	CE-LVD:EN60950-1 CE-EMC:Electromagnetic Compatibility Directive 2014/30/EU FCC:47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Interface

Video Interface	N/A
Audio Interface	N/A
RS485	N/A
Alarm	N/A

Electrical

Power Supply	DC12V(±30%), PoE(802.3af)(Class 0)
Power Consumption	DC12V:1.7W 6.9W(IR on) PoE:2.5W 8.3W(IR on)

Environmental

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Operating Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / 10%RH~95% RH
Strorage Conditions	+5° C ~ +40° C (+41° F ~ +104° F) (daily temperature difference within 15° C/59° F) / 10%RH~95% RH
Ingress Protection	IP67
Vandal Resistance	N/A

Construction

Casing	Metal
Dimensions	244.1mm×79.0mm×75.9mm (9.61"×3.11"×2.99")
Net Weight	0.815Kg (1.80lb)
Gross Weight	1.08Kg (2.38lb)

Ordering Information

Type	Part Number	Description
2MP camera	DH-IPC-HFW5241TP-S	2MP WDR IR Bullet AI Network Camera, WDR,PAL
	DH-IPC-HFW5241TN-S	2MP WDR IR Bullet AI Network Camera, WDR,NTSC
	IPC-HFW5241TP-S	2MP WDR IR Bullet AI Network Camera, WDR,PAL
	IPC-HFW5241TN-S	2MP WDR IR Bullet AI Network Camera, WDR,NTSC
Accessories (optional)	PFA130-E	Junction box
	PFA152-E	Pole Mount
	PFA151	Corner Mount

Accessories

Optional:
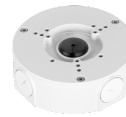
PFA130-E
Junction box
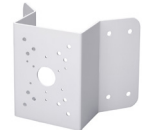
PFA152-E
Pole Mount

PFA151
Corner Mount

Junction Mount	Pole Mount	Corner Mount
PFA130-E	PFA130-E+ PFA152-E	PFA130-E + PFA151

Dimensions (mm/inch)

244.1 [9.61"]
153.1 [6.03"]
79.0 [3.11"]
75.9 [2.99"]

∅90.4 [∅3.56"]
∅70.0 [∅2.76"]
3-∅4.7 [∅0.19"]