

DH-IPC-HFW5241E-Z12E

2MP Pro AI IR Vari-focal Bullet Network Camera



- 1/2.8" 2Megapixel progressive scan STARVIS™ CMOS
- H.265 & H.264 triple-stream encoding
- 25/30 fps@1080P (1920 × 1080)
- WDR (120 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
- 5.3 mm–64.0 mm motorized lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 150 m
- Micro SD memory, IP67, IK10



System Overview

Pro AI series contains Face Detection, 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 and vandal resistant to IK10 standard.

Functions

Face Detection

Face Detection 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.

ePoE technology

The ePoE technology of Dahua, designed internally, adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 or coaxial cable media. Besides, it supports PoE and PoC power supply technology which has greatly simplified construction and wiring. Dahua ePoE technology offer a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

Protection(IP67, IK10, wide voltage)

The camera allows for $\pm 30\%$ 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) and impact tests (IK10), the camera is the choice for installation in even the most unforgiving environments.

Technical Specification						Smart Codec		Yes	
Camera						Streaming Capability		3 Streams	
Image Sensor		1/2.8" 2Megapixel progressive scan STARVIS™ CMOS				Resolution		1080P (1920 × 1080)/1.3 M (1280 × 960)/720P (1280 × 720)/D1 (704 × 576/704 × 480)/VGA (640 × 480)/CIF (352 × 288/352 × 240)	
Effective Pixels		1920 (H) × 1080 (V)							
RAM/ROM		512 MB/128 MB							
Scanning System		Progressive				Frame Rate		Main Stream: 1080P (1 fps–25/30 fps)	
Electronic Shutter Speed		Auto/Manual, 1/3 s–1/100000 s						Sub Stream: D1 (1 fps–25/30 fps)	
Minimum Illumination		0.002 Lux@F1.5						Third Stream: 1080P (1 fps–6 fps)	
IR Distance		Distance up to 150 m (492 ft)				Bit Rate Control		CBR/VBR	
IR On/Off Control		Auto/Manual				Bit Rate		H.264: 32 Kbps–8192 Kbps H.265: 19 Kbps–7424 Kbps	
IR LEDs		4				Day/Night		Auto (ICR)/Color/B/W	
Lens						BLC Mode		BLC/HLC/WDR (120 dB)	
Lens Type		Motorized vari-focal				White Balance		Auto/Natural/Street Lamp/Outdoor/Manual	
Mount Type		Board-in				Gain Control		Auto/Manual	
Focal Length		5.3 mm–64.0 mm				Noise Reduction		3D DNR	
Max. Aperture		F1.5				Motion Detection		Off/On (4 Zone, Rectangle)	
Angle of View		H: 58°–4°, V: 34°–2°				Region of Interest		Off/On (4 Zone)	
Aperture Type		Auto (HALL)				Electronic Image Stabilization (EIS)		Yes	
Close Focus Distance		1.0 m–1.5 m (3.28 ft–4.92 ft)				Smart IR		Yes	
DORI Distance	Lens	Detect	Observe	Recognize	Identify	Defog		Yes	
	W	73m(240ft)	29m(95ft)	15m(49ft)	7m(23ft)	Flip		0°/90°/180°/270°	
	T	883m(2897ft)	353m(1158ft)	177m(580ft)	88m(289ft)	Mirror		Off/On	
Pan/Tilt/Rotation						Privacy Masking		Off/On (4 Area, Rectangle)	
Pan/Tilt/Rotation Range		Pan: 0°–360°; Tilt: 0°–90°; Rotation: 0°–360°				Audio			
Artificial Intelligence						Compression			G.711a, G.711Mu, AAC, G.726, G.723
Face Detection		Support face image capture				Network			
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				Ethernet		RJ-45 (10/100 Base-T)	
Perimeter Protection		Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering				Protocol		IPv4;IPv6;HTTP;HTTPS;TCP;UDP;ARP;RTP;RTSP;RTCP;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP;NTP;Multicast;ICMP;IGMP;NFS;PPPoE;802.1x;SNMP	
People Counting		Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection				Interoperability		ONVIF (Profile S/Profile G/Profile T), CGI, Milstone, Genetec, P2P	
General Intelligence						Streaming Method		Unicast/Multicast	
Event Trigger		Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access, Storage anomaly				Max. User Access		20 Users	
General Intelligence		Object Abandoned/Missing				Edge Storage		NAS;FTP;SFTP Micro SD card 256 GB	
Heat Map		Yes				Web Viewer		IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)	
Video						Management Software		Smart PSS, DSS, DMSS	
Compression		H.265,H.264,H.264B,H.264H, MJPEG (sub stream)				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

Audio Interface	1/1 channel In/Out
RS485	N/A
Alarm	2 channel In: 5mA 5V DC 1 channel Out: 300mA 12V DC

Electrical

Power Supply	DC 12V ($\pm 30\%$), PoE (802.3af) (Class 0)
Power Consumption	<10.3W

Environmental

Operating Conditions	-30° C to +60° C (-22° F to +140° F)/Less than 95% RH
Storage Conditions	-30° C to +60° C (-22° F to +140° F)
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal, plastic
Dimensions	273.2 mm $\times$ 95.0 mm $\times$ 95.0 mm (10.76" $\times$ 3.74" $\times$ 3.74")
Net Weight	1.11 kg (2.44 lb)
Gross Weight	1.51 kg (3.33 lb)

Ordering Information

Type	Part Number	Description
2MP camera	DH-IPC-HFW5241EP-Z12E	2MP Pro AI IR Vari-focal Bullet Network Camera, WDR, PAL
	DH-IPC-HFW5241EN-Z12E	2MP Pro AI IR Vari-focal Bullet Network Camera, WDR, NTSC
	IPC-HFW5241EP-Z12E	2MP Pro AI IR Vari-focal Bullet Network Camera, WDR, PAL
	IPC-HFW5241EN-Z12E	2MP Pro AI IR Vari-focal Bullet Network Camera, WDR, NTSC
Accessories (optional)	PFA152-E	Pole mount

Accessories

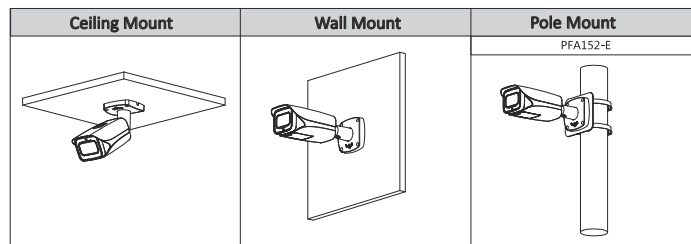
Optional:



PFA152-E
Pole Mount



LR1002
ePoE Over Coax Converter



Dimensions (mm[inch])

