dahua
TECHNOLOGY

DH-IPC-HF71242F-Z-X

12MP Box WizMind Network Camera

ePoE WizMind X

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS,NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

Series Overview

Driven by deep learning algorithms, Dahua WizMind X Series network camera supports various intelligent functions, meeting the requirements of a wide variety of scenes. The camera can accurately recognize people, motor and non-motor vehicles, faces. It also supports PPE detection, smart sound detection, privacy protection, ANPR, parking space management, and enabling 2 intelligent functions at the same time. The camera adopts advanced image processing AI-Powered Image technology, has the Deeplight night vision effect and works with ultra-low streams. It is also dustproof, waterproof and vandal-proof, and is certified as IP67 and IK10 (the type of protection varies depending on the model).

Functions

AI-Powered Image
With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.
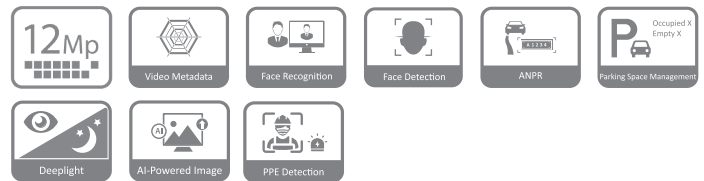
Video Metadata
With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes. The camera can count targets by directions (A>B, B>A, or A< >B), and export the report.

ANPR
With high-performance GPU chip, deep learning algorithm, and lots of sample training learning, Dahua ANPR technology can automatically collect and recognize the vehicle information, including license plate, logo, vehicle type, and vehicle color.

- 12-MP 1/1.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 12 MP (4000 × 3000)@25/30 fps.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Two intelligent functions can be enabled at the same time, such as face recognition+people counting, face detection+people counting and PPE Detection+IVS.
- With deep learning algorithm, it supports: face recognition, face detection, IVS, people counting, video metadata, PPE Detection, parking space management and ANPR, etc.
- Alarm: 2 in, 2 out; audio: 2 in, 1 out; RS-485, BNC; supports max. 512 G Micro SD card.
- 12 VDC/24 VAC/PoE+/ePoE power supply, 12 VDC power output, max. current 165 mA and peak current is 700 mA, easy for installation.

12Mp | Video Metadata | Face Recognition | Face Detection | ANPR | Parking Space Management (Occupied X Empty X)

Deeplight | AI-Powered Image | PPE Detection

PPE Detection
With the PPE Detection function, the camera can detect attributes including workwear, hat,face mask,apron,gloves,shoe covers, boots, seatbelt, safety vest, and determine whether PPE requirements are met. Match attributes alarm or mismatch attributes alarm can be triggered according to the alarm settings.

Parking Space Management
With Parking Space Management, the camera can count the number of parked vehicles and parking spaces available in open parking lots and planned parking lots. It can extract and display the status of parking spaces, so as to facilitate the management of parking spaces and improve parking efficiency.

Cyber Security
Dahua network cameras employ a series of security technologies, including security authentication and authorization, access control protocols, trusted protection, encrypted transmission and encrypted storage. These technologies improve the camera's defense against external cyber threats and prevent malicious programs from compromising the device.

Technical Specification

Camera

Image Sensor	1/1.7" CMOS
Max. Resolution	4000 (H) × 3000 (V)
ROM	8 GB
RAM	4 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.0009 lux@F1.6 (Color, 30 IRE) 0.0005 lux@F1.6 (B/W,30 IRE)
S/N Ratio	>56 dB

Lens

Lens Mount	C/CS
Iris Control Type	DC-Iris; P-Iris

Smart Event

IVS	Abandoned object; missing object

Intelligence

EPTZ	Yes
IVS (Perimeter Protection)	Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection
Face Detection	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions; face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting.
Face Recognition	There are two modes: General mode and counting mode. General mode: Face detection; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions; face snapshot set as face or one inch photo; snapshot strategies (recognition priority and optimization snapshot); face angle filter; optimization time setting. Supports adding 5 group face databases; registering person one by one or in batches; setting face similarity; and supports face comparison with the face database containing up to 200,000 face pictures. Counting mode: Offers advanced customer counter, filters out specified faces from the face database, and exports reports both before and after removing duplicate faces.
PPE Detection	Triggers alarms when the detected object matches or does not match all of the configured attributes (workwear, hat, face mask, apron, gloves, shoe covers, boots, seatbelt, safety vest)
People Counting	Tripwire people counting and people counting in area, generating and exporting report (day/month/year); queue management, generating and exporting report (day/month); 4 rules can be set for tripwire, people counting in area and queue management
Heat Map	Yes

ANPR	ANPR: ANPR, track, priority, snapshot. Vehicle attributes: License plate, vehicle type, vehicle color. Other attributes: Seat belt, smoking, calling. Suppor up to 10,000 blocklist records and 10,000 allowlist records. The camera can recognize plate numbers of vehicles moving at speeds of up to 60km/h.
Parking Space Management	Parking Space Management: Manage outdoor and planned parking lots; manage parking spaces in multiple areas; display the total number of parking spaces and parking spaces that are available; trigger alarms based on a predefined number of vehicles.
Video Metadata	Motor vehicle, non-motor vehicle, face, and human body detection; snapshot; snapshot optimization; optimal face snapshot upload. Motor vehicle attributes: License plate, vehicle type, vehicle color, vehicle logo, seatbelt, smoking, and calling. Generates flow statistics for people, motor vehicles and non-motor vehicles based on the direction, and exports reports. Non-motor vehicle attributes: Type, vehicle color, number of people, top type and color, and hat. Human body attributes: Top and bottom type and color, bag, hat, gender and umbrella.
Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Main stream: 4000 × 3000@(1–25/30 fps) Sub stream: 1920 × 1080@(1–25/30 fps) Third stream: 1920 × 1080@(1–25/30 fps) Fourth stream: 1920 × 1080@(1–25/30 fps) Fifth stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps)
Stream Capability	5 streams
Resolution	12M (4000 × 3000); 8M (3840 × 2160); 6M (3072 × 2048); 5M (3072 × 1728); 5M (2592 × 1944); 4M (2688 × 1520); 3M (2048 × 1536); 3M (2304 × 1296) 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–16384 kbps H.265: 32 kbps–12288 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	DWDR
Scene Self-adaptation (SSA)	Yes
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)

Image Stabilization	Electronic Image Stabilization (EIS)
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	8 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; PCM; G.726; G.723

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; parking space management; scene changing; audio detection; defocus detection; external alarm; face detection; face recognition; video metadata; ANPR; people counting in area; stay alarm; people counting; people number error detection; people stay detection; security exception; PPE detection

Network

Network Port	RJ-45 (10/100/1000 Base-T)
SDK and API	Yes
Network Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI
User/Host	20 (Total bandwidth: 340 M)
Storage	FTP; SFTP; Micro SD card (support max. 512 GB); NAS
Browser	IE: IE11 and later Chrome: Chrome 88.0.4324.190 and later Firefox: Firefox 47.0.2 and later
Management Software	SmartPSS Lite; DSS; DMSS
Mobile Client	iOS; Android
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14

Port

RS-485	1 (baud rate range:1200 bps–115200 bps)
Audio Input	2 channels (3.5 mm JACK port)
Audio Output	1 channel (3.5 mm JACK port)
Alarm Input	2 channels in: 5 mA 3–5 VDC

Alarm Output	2 channels out: 1,000mA 30 VDC/500 mA 50 VAC
Analog Output	1 channel (CVBS output: BNC)

Power

Power Supply	12 VDC/24 VAC/PoE+ (802.3at)/ePoE
Power Consumption	Basic: 8.4 W (12 VDC); 8 W (24 VAC); 6.3 W (PoE) Max. (WDR+ intelligence on+ ICR switch): 17.1 W (12 VDC); 16.5 W (24 VAC); 15 W (PoE)

Environment

Operating Temperature	−30 °C to +60 °C (−22 °F to +140 °F)
Operating Humidity	≤95%
Storage Temperature	−30 °C to +60 °C (−22 °F to +140 °F)
Storage Humidity	10–95%

Structure

Casing Material	Metal + plastic
Product Dimensions	161.6 mm × 86.8 mm × 74 mm (6.36" × 3.42" × 2.91") (L × W × H)
Net Weight	0.80 kg (1.76 lb)
Gross Weight	1.02 kg (2.25 lb)

Ordering Information

Type	Model	Description
12MP Camera	DH-IPC-HF71242F-Z-X	12MP Box WizMind Network Camera
	IPC-HF71242F-Z-X	12MP Box WizMind Network Camera
Accessories (Optional)	PFB110W	Wall/Ceiling/Plane Mount Bracket
	PFB121W	Wall Mount Bracket
	DH-PFL1040-A12PE	10-40 mm
	PFH610V Series	Housings
	PFM320D	12 VDC 2A Power Adapter
	PFM900-E	Integrated Mount Tester
	TF-P100	MicroSD Memory Card

Accessories

Optional:

PFB110W
Wall/Ceiling/Plane
Mount Bracket

PFB121W
Wall Mount Bracket

DH-PFL1040-A12PE
10-40 mm

PFH610V Series
Housings

PFM320D
12 VDC 2A Power Adapter

PFM900-E
Integrated Mount Tester

TF-P100
MicroSD Memory Card

Dimensions (mm[inch])

Ceiling Mount	Wall Mount