DH-IPC-HDBW3241E-(A)S-S2

WizSense 2MP Fixed Dome Network Camera with IR

WizSense, launched by Dahua Technology, is a series of intelligent products and solutions artificial intelligence that adopts an independent artificial intelligence chip and a learning algorithm deep. It focuses on humans and vehicles with great precision, allowing users to to act quickly on defined objectives. Based on Dahua's advanced technologies, WizSense offers smart, simple and inclusive products and solutions.

Series Summary

Dahua WizSense 3 Series Network Camera greatly saves bandwidth and storage space thanks to its AI coding technology. Powered by its Advanced deep learning algorithms, the camera supports intelligent functions such as perimeter protection, intelligent motion detection (SMD), quick selection and AI SSA (AI Scene Adaptation), making it easy and convenient to use. The Starlight technology and its large aperture lens also allow the camera to produce clear and vivid images even in low light conditions.

Functions

SMD 4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify the targets that trigger motion detection alarms. Filter the non-target objects, such as small and large animals, to prevent them from trigger false alarms. With an AI-enabled NVR, Quick Pick technology is available, which allows you to easily search and select human and vehicle targets from SMD event videos, prioritizing the highest matches.

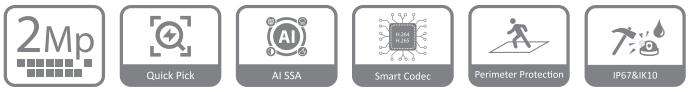
AI SSA

Dahua's AI Scene Adaptation (AI SSA) adopts advanced scene adaptive algorithms to Deep learning to detect environmental conditions such as rain, fog, backlight, low light and flicker, to adjust the image parameters to suit the conditions, ensuring that clear images are always produced.

Smart H.265+ and Smart H.264+

With an advanced scene-adaptive speed control algorithm, the technology Dahua smart coding achieves higher coding efficiency than H.265 and H.264, provides high quality video and reduces storage cost and transmission.

- 2MP 1/2.8" CMOS image sensor, excellent low luminance performance and high definition images.
- Maximum output of 2 MP (1920 × 1080) at 25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, Max IR distance: 50m.
- ROI, SMART H.264+/H.265+, AI H.264/H.265, flexible encoding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermark, applicable to various monitoring scenes.
- Intelligent Detection: Intrusion, Tripwire (Supports classification and accurate detection of vehicles and humans).
- Anomaly Detection: Motion Detection, Masking privacy, scene switching, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access and detection of voltage.
- Alarm: 1 input, 1 output (only support AS); Audio: 1 input, 1 output (only support AS); Micro SD card maximum 256G. Built-in microphone.
- 12VDC/PoE power supply makes installation easy.
- IP67, IK10 protection.
- SMD 4.0, AI-SSA.



Perimeter protection

Thanks to the deep learning algorithm, the perimeter protection technology of Dahua can recognize people and vehicles accurately. In restricted areas (such as pedestrian and vehicle areas), intelligent detection false alarms based on the type of target (such as tripwires or intrusions) are greatly reduced extent.

Protection (IP67, IK10, wide voltage)

IP67: The camera passes a series of strict tests for dust and moisture resistance. It has a Dustproof function and the shell can work normally after being immersed in water at 1 m deep for 30 minutes.

IK10: The housing can withstand more than 5 blows from a 5 kg hammer falling from a height of 40 cm (impact energy is 20 J).

Wide voltage: The camera allows an input voltage tolerance of ±30% (for some power supplies) (wide voltage range) and is widely applied in outdoor environments with unstable voltage.

Cyber Security

Dahua network cameras employ a number of security technologies, including which include security authentication and authorization, control protocols access, reliable protection, encrypted transmission and encrypted storage. These technologies improve the camera's defense against cyber threats external sources and prevent malicious programs from invading the device.

Technical specifications

Camera

Image sensor	1/2.8" CMOS
Maximum resolution	1920 (height) × 1080 (vertical)
read only memory	128 MB
RAM	512 MB
Scanning system	Progressive
Electronic shutter speed	Auto/Manual 1/3 s–1/100,000 s
Minimum illumination	0.002 lux at F1.4 (color, 30 IRE) 0.0002 lux at F1.4 (black and white, 30 IRE) 0 lux (illuminator activated)
Signal to noise ratio	> 56 dB
Illumination distance	Up to 50 m (164.04 ft)
Illuminator on/off control	Automatic/Manual
Illuminator number	3 (infrared LED)
Horizontal, vertical and rotary range of motion	Swivel: 0°–355°; Tilt: 0°–75°; Rotation: 0°–355°

Lens

Lens Type	Fixed focus
Lens mount	M12
Focal length	2.8 mm
Maximum opening	F1.4
Field of view	2.8mm: horizontal: 107°; vertical: 56°; diagonal: 127°
Iris control	Fixed
Close focusing distance	2.8mm: 0.7m (2.3ft)

Dori Distance

Lens	Detect	Notice	Recognize	Identify
2.8 millimeters	43.9 meters (144.03 feet)	17.5 meters (57.42 feet)	8.8 meters (28.87 feet)	4.4 meters (14.44 feet)

* DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) that defines the ability of a person viewing the video to distinguish people or objects within a covered area. The numbers in this table do not reflect function distances smart. For smart function distances, please refer to the user manual.
installation and commissioning or project design tool.

Intelligence

IVS (Perimeter Protection)	Tripwire, Intrusion (supports accurate vehicle and person classification and detection)
AI SSA	Yeah
Quick selection	With AI NVR, quickly detect human/vehicular targets that interest users from SMD events
Smart Search	Work together with Smart NVR to perform refined smart search, event extraction and event video fusion.

Video

Video compression	H.265; H.264; H.264H; H.264B; MJPEG (only supported by secondary stream)
Smart Codec	Smart H.265+ Smart H.264+
AI Coding	IA H.265 IA H.264
Video frame rate	Main stream: 1920 × 1080 at (1–25/30) fps Sub stream 1: 704 × 576 at (1–25 fps)/704 × 480 at (1–30 fps) Sub stream 2: 1920 × 1080 at (1–25/30 fps) * The above values are the maximum frame rates for each transmission; for multiple transmissions, the values will be subject to the full coding capability.
Transmission capacity	3 streams
Resolution	1080p (1920 × 1080); 1.3M (1280×960); 720p (1280×720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240); VGA (640 × 480)
Bit rate control	CBR/VBR
Video bit rate	H.264: 3 kbps–8192 kbps H.265: 3 kbps–8192 kbps
Day/Night	Automatic (ICR)/Color/B/W
BLC	Yeah
HLCC (Human Behavior Clearinghouse)	Yeah
Wide Dynamic Range (WDR)	120dB
Self-adaptation of the scene (SSA)	Yeah
White balance	Automatic; natural; streetlight; exterior; manual; regional custom
Gain control	Car
Noise reduction	3D noise reduction
Motion detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Defog	Yeah
American Corporations Association	Yeah
Image rotation	0°/90°/180°/270° (supports 90°/270° with resolution 1920x1080 or lower)
Mirror	Yeah
Privacy Masking	4 areas

Audio

Built-in microphone	Yeah
Audio compression	G.711a; G.711Mu; PCM; G.726; G.723

Alarm

Alarm event	- AS: No SD card; SD card full; SD card error; Warning lifespan (only support Dahua card); Network disconnection; IP conflict; Illegal access; Motion detection; Tampering Video; Intrusion; Tripwire; Scene Change; Detection audio; Voltage detection; External alarm; SMD; Exception security - S: No SD card; SD card full; SD card error; Warning lifespan (only support Dahua card); Network disconnection; IP conflict; Illegal access; Motion detection; Tampering Video; Intrusion; Tripwire; Scene Change; Detection audio; Voltage detection; SMD; Safety exception

Grid

Network port	RJ-45 (10/100 Base-T)
SDK and API	Yeah
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; PPPoE; SNMP
Cyber Security	Video encryption; Firmware encryption; Configuration encryption; Digest; WSSE; Account lockout; Security logs; IP/MAC filtering; X.509 certification generation and import; syslog; HTTPS; 802.1x; Trusted boot; Trusted execution; Trusted upgrade
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec
User/Host	20 (Total bandwidth: 64M)
Storage	FTP; SFTP; Micro SD card (support max 256G); NAS
Browser	EN:IE11 Chrome Firefox
Management software	Smart PSS; DSS; DMSS
Mobile client	iOS; Android

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 and CAN/CSA C22.2 No. 62368-1-14

Port

Audio input	1 channel (RCA port) (AS compatible only)
Audio output	1 channel (RCA port) (AS compatible only)
Alarm input	1 input channel: wet contact, 5 mA 3 V–5 VDC (only AS-compatible)
Alarm output	1 output channel: wet contact, 300 mA 12 VDC (only compatible with AS)

Force

Power supply	12VDC/PoE (802.3af)
Energy consumption	Basic: 2.3 W (12 VDC); 2.9W (PoE) Max (WDR + IR intensity + Intelligence): 6.6W (12VDC); 7.7W (PoE)

Atmosphere

Operating temperature	– 40°C to +60°C (–40°F to 140°F) / Less than 95% relative humidity
Storage temperature	– 40°C to +60°C (–40°F to 140°F)
Protection	IP67; IK10

Structure

Box	Metal
Product Dimensions	89.1 mm × Φ111.7 mm (3.51" × Φ4.40")
Net weight	516 grams (1.14 pounds)
Gross weight	670 grams (1.48 pounds)

Ordering Information

Guy	Model	Description
2MP camera	DH-IPC-HDBW3241E-AS-S2	WizSense 2MP Fixed Dome Network Camera with IR
	DH-IPC-HDBW3241E-S-S2	WizSense 2MP Fixed Dome Network Camera with IR
Accessories (Optional)	PFA136	Junction box
	PFA109	Mounting adapter
	PFB220C	Ceiling mount bracket
	PFB203W	Wall mounting
	PFA152-E	Wall mounting
	PFM321D	12V DC 1A power adapter
	PFM900-E	Integrated assembly tester
	TF-P100	TLC SD Card

Accessories

Optional:

PFA136
Union
Box support

PFA109
Mount
Adapter

PFB220C
Ceiling Mount
Medium

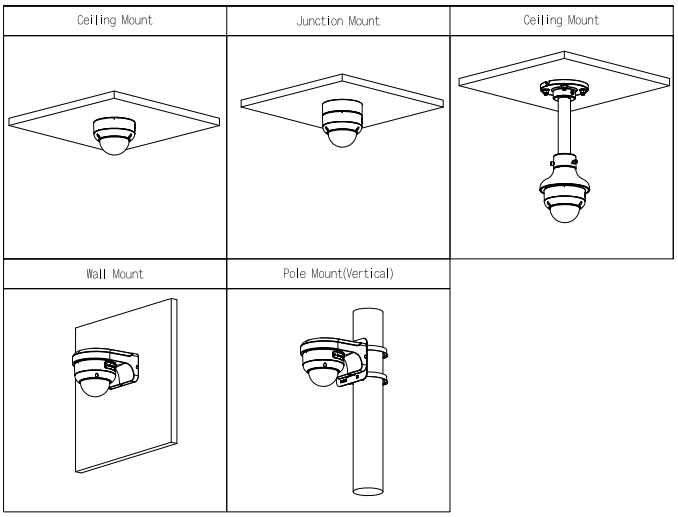
PFB203W
Wall
Mount

PFA152-E
Pole
mount

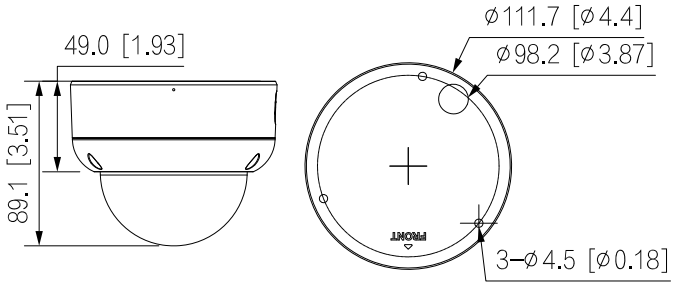
PFM321D
12 VDC 1 A
Power adapter

PFM900-E
Integrated
Assembly tester

TF-P100
TLC SD
Card



Dimensions (mm [inches])



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