Manuals+ — User Manuals Simplified.

TECHNOLOGY DH-IPC-
HFW3241T-Z(A)S-S2
Vari Focal Bullet
Network Camera

dahua TECHNOLOGY DH-IPC-HFW3241T-Z(A)S-S2 Vari Focal Bullet Network Camera Owner's Manual

Contents

dahua TECHNOLOGY DH-IPC-HFW3241T-Z(A)S-S2 Vari Focal Bullet Network Camera

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chips and deep learning algorithms. It focuses on humans and vehicles with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple, and inclusive products and solutions.

Series Overview

Dahua WizSense 3 Series Network Camera greatly saves on bandwidth and storage space through its AI Coding technology. Driven by its advanced deep learning algorithms, the camera supports intelligent functions such as perimeter protection, smart motion detection (SMD), Quick Pick, and AI SSA (AI Scene Self-adaptation), making it easy and convenient to use. Starlight technology and its large aperture lens also allow the camera to produce clear, vivid images even in poor lighting conditions.

Functions

SMD 4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

AI SSA

Dahua AI Scene Self-adaptation (AI SSA) adopts deep learning algorithms to detect environmental conditions, such as rain, fog, backlight, low light, and flicker, to adjust the parameters of the image to suit the conditions, ensuring that clear images are always produced.

Smart H.265+ & Smart H.264+

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

- 2-MP 1/2.8″ CMOS image sensor, excellent low luminance performance, and high definition of images.
- Outputs max. 2 MP (1920 × 1080) @ 25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, max. IR distance: 60 m.
- ROI, SMART H.264 +/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, and digital watermarking, applicable to various monitoring scenes.
- Intelligent detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human).
- Abnormality detection: Motion detection, privacy masking, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 1 in, 1 out (Only – ZAS supports); audio: 1 in, 1 out (Only – ZAS supports); max. 256 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply facilitates installation.
- IP67, IK10 (optional) protection.
- SMD 4.0, AI SSA.
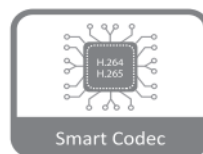
Perimeter Protection

With a deep learning algorithm, Dahua Perimeter Protection technology can recognize humans and vehicles accurately. In restricted areas (such as pedestrian areas and vehicle areas), the false alarms of intelligent detection based on target type (such as tripwire, intrusion) are largely reduced.

Protection (IP67, Wide Voltage)

IP67: The camera passes a series of strict tests on dust and soak. It has a dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes. Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environments with unstable voltage.

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 comprising the device.

Technical Specification

Camera

Image Sensor	1/2.8″ CMOS
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	512 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.002 **lux@F1.5** (Color, 30 IRE) 0.0002 **lux@F1.5** (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	Up to 60 m (196.85 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	4 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360°; Tilt: 0°–90°; Rotation: 0°–360°

Lens

Lens Type	Motorized varifocal			
Lens Mount	φ14			
Focal Length	2.7 mm–13.5 mm			
Max. Aperture	F1.5			
Field of View	Horizontal: 109°–30° Vertical: 56° –17° Diagonal: 137° –35°			
Iris Control	Fixed			
Close Focus Distance	0.8 m (2.62 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	44.1 m (144.67 ft)	17.6 m (57.74 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	T	144.8 m (475.02 ft)	57.9 m (189.96 ft)	28.9 m (94.82 ft)	14.8 m (48.56 ft)
	*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to the installation and commissioning manual/ project design tool.				

Intelligence

IVS (Perimeter Protection)	Tripwire, intrusion (support the classification and accurate detection of vehicle and human)
AI SSA	Yes
Quick Pick	With AI NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events.
Smart Search	Work together with Smart NVR to perform refined 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 substream)
Smart Codec	Smart H.265+ Smart H.264+

AI Coding	AI H.265 AI H.264
Video Frame Rate	Main stream: 1920 × 1080 @ (1–25/30) fps Sub stream 1: 704 × 576 @ (1–25 fps)/704 × 480 @ (1–30 fps) Substream 2: 1920 × 1080 @ (1–25/30 fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity
Stream Capability	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	Auto (ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
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)
Image Stabilization	Electronic Image Stabilization (EIS)
Region of Interest (RoI)	Yes (4 areas)

Defog	Yes
AFSA	Yes
Image Rotation	0°/90°/180°/270° (support 90°/270° with 1920 × 1080 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

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

Alarm

Alarm Event	-ZAS: No SD card; SD card full; SD card error; service life warning (only supported by Dahua card); network disconnection; IP c conflict; illegal a ccess; motion detection; video tampering; intrusion; tripwire; scene cha nging; audio detection; voltage detection; defocus detection; external al arm; SMD; safety exception -ZS: No SD card; SD card full; SD card error; service life warning (only supported by Dahua card); network disconnection; IP conflict; illegal ac cess; motion detection; video tampering; intrusion; tripwire; scene chan ging; audio detection; voltage detection; defocus detection; SMD; safet y exception

Network

Network Port	RJ-45 (10/100 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; I GMP; NFS; PPPoE; SNMP; P2P

|	
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
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI
User/Host	20 (Total bandwidth: 64 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS
Browser	IE: IE11 Chrome Firefox
Management Software	SmartPSS Lite; 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 & CAN/CSA C22.2 No. 62368-1-14
Port	
Audio Input	1 channel (RCA port) (Only- ZAS supports)
Audio Output	1 channel (RCA port) (Only- ZAS supports)
Alarm Input	1 channel in wet contact, 5 mA 3 V–5 VDC (Only- ZAS supports)
Alarm Output	1 channel out wet contact, 300 mA 12 VDC (Only- ZAS supports)
Power	
Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2.3 W (12 VDC); 2.9 W (PoE) Max. (WDR + IR intensity + Intelligence): 6.6 W (12 VDC); 7.7 W (PoE)

Environment	
Operating Temperature	–30 °C to +60 °C (–22 °F to 140 °F) /Less than 95% RH
Storage Temperature	–40 °C to +60 °C (–40 °F to 140 °F)
Protection	IP67, IK10 (optional)
Structure	
Casing	Metal
Product Dimensions	244.1 mm × 79.0 mm × 75.9 mm (9.61″ × 3.11″ × 3.00″) (L × W × H)
Net Weight	820 g (1.81 lb)
Gross Weight	1090 g (2.40 lb)

Ordering Information		
Type	Model	Description
2MP Camera	DH-IPC-HFW3241T-ZAS-S2	2MP IR Vari-focal Bullet WizSense Network Camera
	DH-IPC-HFW3241T-ZS-S2	2MP IR Vari-focal Bullet WizSense Network Camera
Accessories (Optional)	PFA130-E	Junction Box
	PFA135	Junction Box
	PFA152-E	Pole Mount
	PFM321D	12 VDC 1 A Power Adapter
	PFM900-E	Integrated Mount Tester
	PFM100	TLC SD Card

Accessories

Optional:
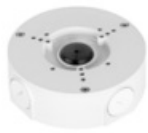
PFA130-E Junction Box	PFA135 Junction Box	PFA152-E Pole Mount
PFM321D 12 VDC 1 A Power Adapter	PFM900-E Integrated Mount Tester	TF-P100 TLC SD Card

Ceiling Mount	Junction Mount	Pole Mount(Vertical)

Dimensions (mm[inch])
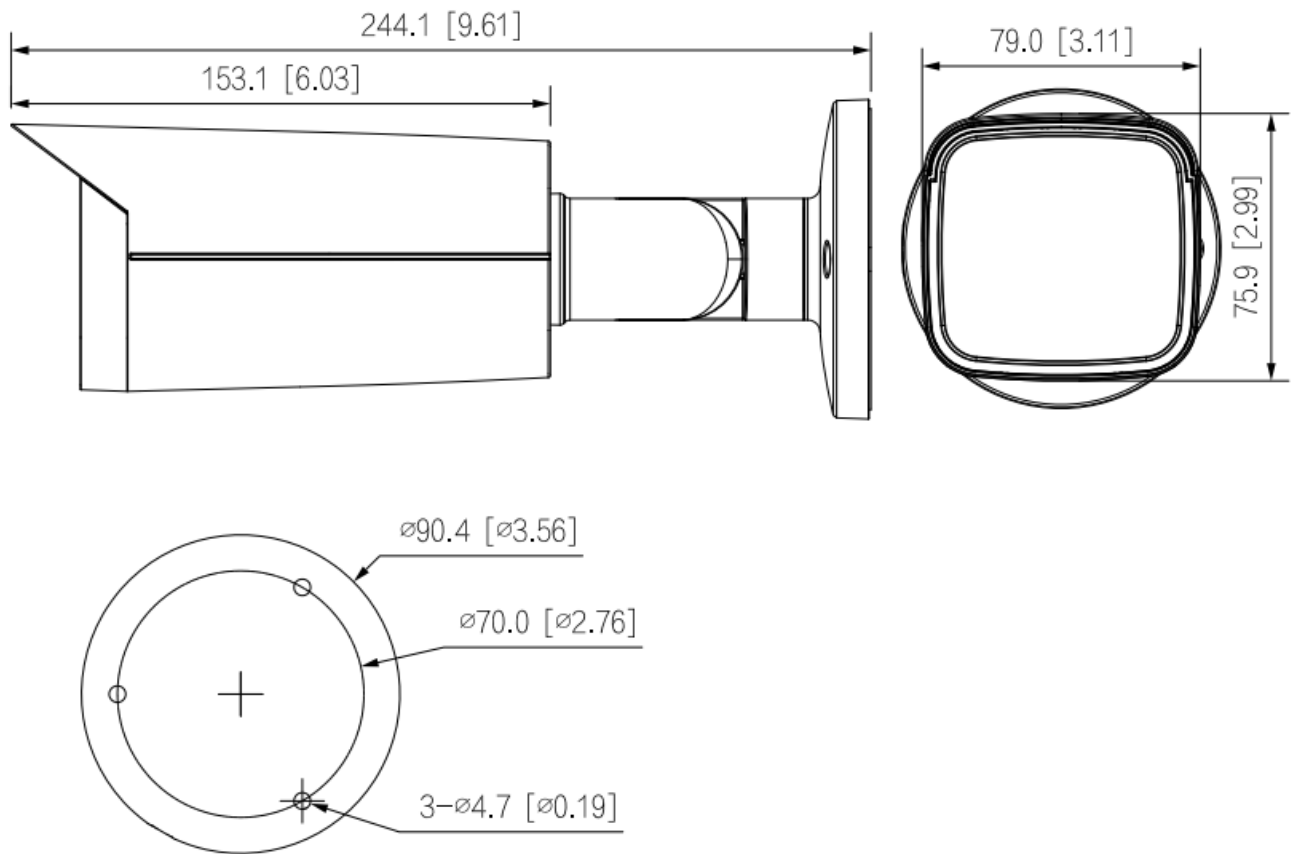
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- **www.dahuasecurity.com**

Documents / Resources

dahua TECHNOLOGY DH-IPC-HFW3241T-Z(A)S-S2 Vari Focal Bullet Network Camera [pdf] Owner's Manual
DH-IPC-HFW3241T-Z A S-S2 Vari Focal Bullet Network Camera, DH-IPC-HFW3241T-Z A S-S2 , Vari Focal Bullet Network Camera, Bullet Network Camera, Network Camera, Camera

References

- **User Manual**