



alhua TECHNOLOGY DH-IPC-HFW2449TL-S-PRO 4MP Wiz Color Fixed Focal Network Camera Owner's Manual

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Important Information

Launched by Dahua Technology, Wiz Sense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, Wiz Sense provides intelligent, simple and inclusive products and solutions.

Series Overview

With advanced deep learning algorithm, Dahua Wiz Sense 2 Series network camera supports intelligent functions, such as perimeter protection and smart motion detection. With starlight technology, this series camera provides a better image effect in the condition of low illuminance.

Functions

Wiz Color Technology

Dahua Wiz Color Technology seamlessly combines with the powerful AI-ISP, large pixel size sensor and large aperture in cameras. This unique integration enables cameras to effortlessly capture high-quality images with vibrant colors during nighttime scenarios, ensuring fine details are preserved and minimizing motion blur. Unlike traditional self-illuminating cameras, Dahua Wiz Color Technology maximizes the utilization of weak light sources, such as moonlight and city lights reflected in the sky, delivering captivating full-color images of the entire scene. It also ensures that monitoring distances are not compromised at night due to limited illumination ranges, facilitating full-color image capture even over long distances.

AI-ISP

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

Perimeter Protection

With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

- 4-MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520) @20 fps, and supports 2560×1440 (2560 × 1440) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in warm light, and the max. illumination distance is 50 m.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)
- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Supports max. 256 G Micro SD card; built in Mic.
- 12 VDC/PoE power supply, easy for installation.
- IP67 protection.
- SMD Plus



Smart H.265+ & Smart H.264+

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

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.

Protection (IP67, Wide Voltage)

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

Technical Specification

Camera	
Image Sensor	1/1.8" CMOS

Max. Resolution	2688 (H) × 1520 (V)				
ROM	128 MB				
RAM	256 MB				
Scanning System	Progressive				
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s				
Min. Illumination	0.0005 lux@F1.0				
S/N Ratio	>56 dB				
Illumination Distance	Up to 50 m (164.04 ft) (Warm light)				
Illuminator On/Off Control	Auto; Manual				
Illuminator Number	4 (Warm light)				
Angle Adjustment	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°				
Lens					
Lens Type	Fixed-focal				
Lens Mount	M16				
Focal Length	6 mm; 2.8 mm; 3.6 mm				
Max. Aperture	F1.0				
Field of View	2.8 mm: H: 112°; V: 60°; D: 134° 3.6 mm: H: 94°; V: 50°; D: 113° 6 mm: H: 58°; V: 31°; D: 67°				
Iris Control	Fixed				
Close Focus Distance	2.8 mm: 2 m (6.56 ft) 3.6 mm: 3 m (9.84 ft) 6 mm: 6 m (19.69 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	57.9 m (18 9.96 ft)	23.2 m (76.12 ft)	11.6 m (3 8.06 ft)	5.8 m (19.03 ft)
	3.6 mm	70.3 m (23 0.64 ft)	28.1 m (92.19 ft)	14.1 m (4 6.26 ft)	7.0 m (22.97 ft)
	6 mm	116.6 m (3 82.55 ft)	46.6 m (152.89 ft)	23.3 m (7 6.44 ft)	11.7 m (38.39 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 installation and commissioning manual/project design tool.				
Intelligence					
IVS (Perimeter Protection)	Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human);				
SMD	SMD Plus				
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: 2688 × 1520@(1–20 fps)/2560 × 1440@(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 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.
Streaming Capability	2 streams
Resolution	4M (2688 × 1520/2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	VBR;CBR
Video Bit Rate	H.264: 32 kbps–6144 kbps; H.265: 12 kbps–6144 kbps
Day/Night	Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto/Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas
LDC	Yes
Audio	
Built-in MIC	Yes, built-in Mic
Audio Compression	G.711a; G.711Mu; PCM; G.726
Alarm	
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; SMD; security 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; IGMP; NFS; PPPoE; P2P; Bonjour; Auto Registration
Interoperability	ONVIF (Profile S & Profile G & Profile T); CGI
User/Host	20 (Total bandwidth: 48 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	IE; Chrome; Firefox
Management Software	Smart PSS Lite; DSS; DMSS
Mobile Client	iOS; Android
Cyber Security	Video encryption ; Firmware encryption; Configuration encryption; Digest; WSS E; Account lockout; Security logs; IP/MAC filtering ;Generation and importing of X.509 certification;syslog;HTTPS;802.1x;Trusted boot ;Trusted execution; Trusted upgrade; Session security; Security warning
Certification	
Certifications	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU;
Power	
Power Supply	12 VDC; PoE
Power Consumption	Basic: 2.0 W (12 VDC); 3.0 W (PoE); Max.: 5.6 W (12 VDC); 7.2 W (PoE) (H.265+ intelligence on + WDR + illuminator intensity)
Environment	
Operating Temperature	−40 °C to +60 °C (−40 °F to +140 °F)
Operating Humidity	≤95% (RH), non-condensing
Storage Temperature	−40 °C to +60 °C (−40 °F to +140 °F)
Storage Humidity	≤95% (RH), non-condensing
Protection	IP67
Structure	
Casing Material	Metal
Product Dimensions	197.9 mm × 80.2 mm × 76.2 mm (7.79" × 3.16" × 3.00") (L × W × H)
Net Weight	0.57 kg (1.26 lb)
Gross Weight	0.72 kg (1.59 lb)

Ordering Information

Type	Model	Description
IP CAMERA	DH-IPC-HFW2449TL-S-PRO	4MP Wiz Color Fixed-focal Bullet Wiz Sense Network Camera
Accessories (Optional)	DH-PFA151	Corner Mount Bracket
	G3416GW	G3/4" Water Joint
	DH-PFA130-E	Water-proof Junction Box
	DH-PFA157	Pole Mount Bracket
	DH-PFA157	Pole Mount Bracket
	DH-PFA134	Junction Box
	DH-PFM321-EN	DC12V1A power adapter
	DH-PFM321D-EN	DC12V 1A power adapter
	DH-PFM320D-EN	DC12V2A power adapter
	PFM900-E	Integrated Mount Tester
	DHI-TF-P100/256GB	Micro SD Card

Accessories

Optional:

- DH-PFA151 Corner Mount Bracket



- G3416GW G3/4" Water Joint



- DH-PFA130-E Water-proof Junction Box



- DH-PFA157 Pole Mount Bracket



- DH-PFA134 Junction Box



- DH-PFM321-EN DC12V1A power adapter



- DH-PFM321D-EN DC12V 1A power adapter



- DH-PFM320D-EN DC12V2A power adapter



- PFM900-E Integrated Mount Tester

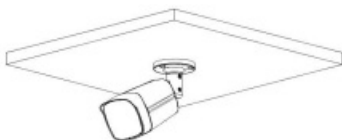


- DHI-TF-P100/256GB Micro SD Card

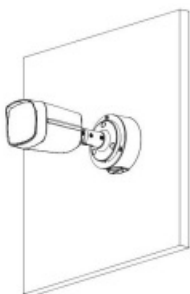


Mounting Instructions

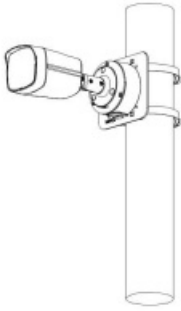
- Ceiling Mount



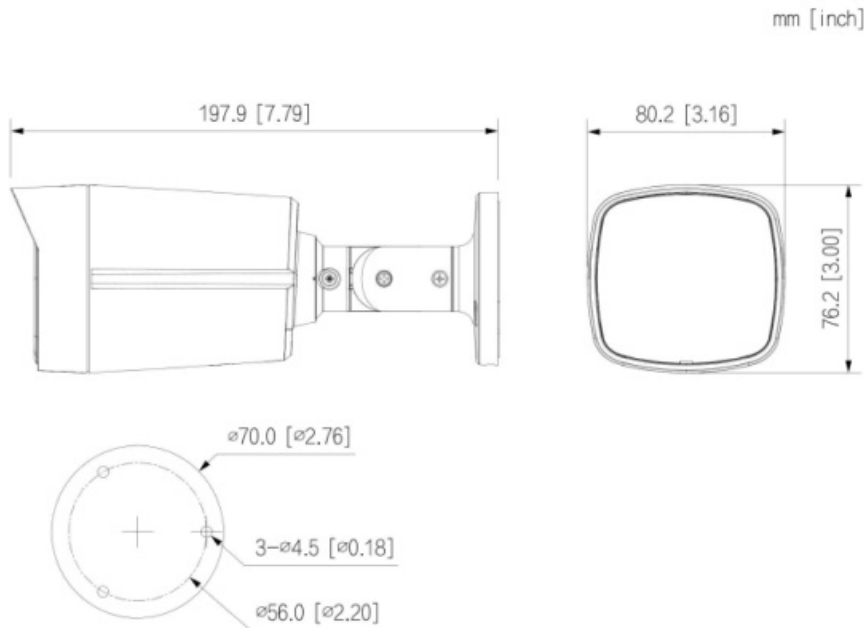
- Wall Mount



- Pole Mount(Vertical)



Dimensions (mm[inch])



CUSTOMER SUPPORT

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www.dahuasecurity.com



Documents / Resources

	<p>alhua TECHNOLOGY DH-IPC-HFW2449TL-S-PRO 4MP Wiz Color Fixed Focal Network Camera [pdf] Owner's Manual</p> <p>DH-IPC-HFW2449TL-S-PRO 4MP Wiz Color Fixed Focal Network Camera, DH-IPC-HFW2449TL-S-PRO, 4MP Wiz Color Fixed Focal Network Camera, Fixed Focal Network Camera, Focal Network Camera, Network Camera</p>
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References

-  [Dahua Technology - World Leading Video-Centric AIoT Solution & Service Provider](#)
- [User Manual](#)

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