

DH-ESD8A1425-HNR-F

4MP 25 Starlight+ IR Explosion-proof Camera



- 1/1.8 4Megapixel STARVIS™ CMOS
- 25x optical zoom
- Starlight+ technology
- IR distance up to 100m
- Perimeter Protection
- Face detection
- SMD 4.0
- IP68
- Optical Fiber



Privacy Protection



Perimeter Protection



Face Detection



WDR



Starlight



Irregular Black Block Masking

Series Overview

Designed with stainless steel, cameras in the explosion-proof series are highly durable, working stably in environments with dust and flammable and explosive gas. These cameras are explosion proof, producing smooth, high-definition videos through their integrated system. The series received ATEX and IECEx certification, and is highly suitable for use in the petroleum industry, petrochemical industry and more.

Functions

Privacy Protection

Dahua Privacy Protection technology is capable of masking detected human faces and subsequently removing the mask, ensuring the privacy of specific individuals is protected.

Protection (IP68, TVS 6000 V)

IP68, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

Face Detection

Face detection is to detect if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.

Wide Dynamic Range

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

Starlight Technology

Dahua Starlight technology utilizes advanced image processing and optical technologies to deliver clear videos, even in low-lighting environments. This technology is extensively employed across a range of settings that have inadequate lighting.

Irregular Black Block Masking

Dahua's black block masking function supports the use of irregular shapes for masking, ensuring privacy in public and private locations.

Technical Specification

Camera	
Image Sensor	1/1.8" CMOS
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	4 GB
RAM	1 GB
Electronic Shutter Speed	1s–1/30000s
Scanning System	Progressive
Min. Illumination	0.001 lux@F1.6 (Color, 30 IRE) 0.0001 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
Illumination Distance	100 m (328.08 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off
Illuminator Number	12 (Warm light)

Lens	
Focal Length	5.4 mm–135 mm
Max. Aperture	F1.6–F4.0
Field of View	H: 59.8°–2.8°; V: 33.7°–1.9°; D: 63.3°–4°
Optical Zoom	25×
Hybrid Zoom	Auto; Semi-auto; Manual
Focus Control	Auto; Semi-auto; Manual
Close Focus Distance	0.1 m–2.0 m (0.33 ft–6.56 ft)
Iris Control	Auto; Manual

	Lens	Detect	Observe	Recognize	Identify
	5.4 mm–135 mm	1862 m (6109.1 ft)	735.5 m (2413.1 ft)	372 m (1221.8 ft)	186 m (610.9 ft)
DORI Distance	*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.				

PTZ	
Pan/Tilt Range	Pan: 0° to 360°; Tilt: 0° to 90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–70°/s; Tilt: 0.1°/s–50°/s
Preset Speed	Pan: 70°/s; Tilt: 50°/s
Preset	300
Tour	8
Pattern	5
Scan	5

Power-off Memory	Yes
Idle Motion	Preset;Pattern;Tour;Scan
PTZ Protocol	DH-SD Pelco-P/D(Auto recognition)

Intelligence	
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; auto tracking
Face Detection	Supports face detection, optimization, capturing pictures, uploading high-quality face snapshots and enhancing face images. Attribute extraction is also supported, where 6 attributes and 8 expressions can be detected. Face cutout is also offered, where you can cutout one face at a time and customize the size to be a one-inch photo. The supported methods for capturing snapshots are real-time capturing, quality first, and selecting a preferred image among a group of snapshots.
Smart Tracking	AutoTracking 3.0
SMD	SMD 4.0

Active Deterrence	
Sound Warning	Built in 29 voice alarm contents, supporting custom import of 10 voice contents; Sound: 0-100 adjustable; The playback frequency can be adjusted from 1 to 10 times; (requires external speaker for use)

Video	
Video Compression	Smart H.265+;H.265;Smart H.264+;H.264B;H.264M;H.264H;MJPEG(Sub Stream 1)
Streaming Capability	3 streams
Resolution	4M (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)
Video Frame Rate	Main stream: 4M/3M/1080p/1.3M/720p@(1–25/30 fps) Sub stream 1: D1/VGA/CIF@(1–25/30 fps) Sub stream 2: 1080p/1.3M/720p@(1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H264: 96 kbps–14848 kbps H265: 38 kbps–8960 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
WDR	90 dB
HLC	Yes
White Balance	Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/ Natural light/Street lamp
Gain Control	Auto; Manual
Noise Reduction	2D NR;3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic Image Stabilization (EIS)

Explosion-proof Series | DH-ESD8A1425-HNR-F

Defog	Electronic
Digital Zoom	16x
Image Rotation	180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view; Multiple colors and mosaic available
S/N Ratio	≥55 dB

Audio

Audio Compression	PCM ; G.711a ; G.711Mu ; G.726 ; MPEG2-Layer2 ; G722.1 ; G729 ; G723
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Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;SMB;NFS
Interoperability	ONVIF (Profile S & Profile G & Profile T);CGI;SDK
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	Micro SD card (512 GB); FTP/SFTP; NAS
Browser	IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions Safari 10 and later versions
Management Software	DMSS;DSS Pro
Mobile Client	iOS;Android

Certification

Certifications	ATEX: EN IEC 60079-0/EN 60079-1/EN 60079-31/EN IEC 60079-31 IECEX: IEC 60079-0/IEC 60079-1/IEC 60079-31 ATEX: II 2G Ex db IIC T6 Gb, II 2D Ex tb IIIC T80 °C Db IECEX: Ex db IIC T6 Gb, Ex tb IIIC T80 °C Db
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Port

RS-485	1 (Bit range: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT,bare wire)
Alarm Input	2 channel
Alarm Output	1 channel
Alarm Linkage	Capture; recording; send email; preset; tour; pattern; alarm digital output; audio
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection
Optical Fiber	100 M single fiber port Specifications: 1310 nm TX/1550 nm RX Transmission distance: 20 km (12.43 mi)

Power

Power Supply	100–240 VAC; 50/60 Hz
Power Consumption	Basic: 20W

Power Consumption	Max. (Basic power consumption + IR on + PTZ operation): 31.5 W (220 VAC)
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Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	≤95%
Protection	TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Casing Material	SUS316L
Product Dimensions	512.2 mm × 261.5 mm × 362.7 mm (20.17" × 10.3" × 14.28") (L × W × H))
Net Weight	19.3 kg (42.55 lb)
Gross Weight	65.6 kg (144.62 lb)

Ordering Information

Type	Model	Description
Explosion-proof Camera	DH-ESD8A1425-HNR-F	4MP 25 Starlight+ IR Explosion-proof Camera
Accessories	PFB7732W-316	Wall Mount Bracket
	DH-PFB7732C	Ceiling Mount Bracket-DH-PFB7732C-316
	CZ300	Explosion-proof Control Box
	ZAEX02	Explosion-proof Cable Gland
	ZANXG-1.5	Explosion-proof flexible conduit-M25-1500-316L

Accessories

Included:



PFB7732W-316
Wall Mount Bracket

Optional:



DH-PFB7732C
Ceiling Mount Bracket-
DH-PFB7732C-316



CZ300
Explosion-proof Control
Box

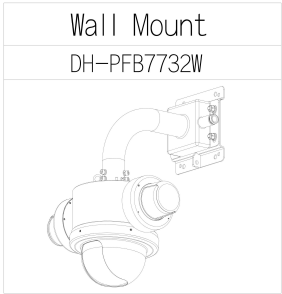


ZAEX02
Explosion-proof Cable
Gland

Optional:



ZANXG-1.5
Explosion-proof flexible
conduit-M25-1500-316L



Dimensions (mm[inch])

mm[inch]

