

DH-ECA7A1425-HNR-XA-F

4MP 25 Starlight IR EXPLOSION-PROOF CAMERA




System Overview

With its explosion-proof structure, this series ensures that safety and performance are delivered with each camera and its accessories. Its stainless steel design and ATEX and IECEx certification promise durability and protection for the surrounding area. It is applicable to Class I/II/III, Divisions 1 and 2, Zones 1, 2, 21, 22, and Groups IIC and IIIC, and is ideal for use in a wide variety of scenarios such as chemical plants, coal mines, fuel oil plants, and flour mills.

Functions

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.

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.

- 1/1.8" 2Megapixel STARVIS™ CMOS.
- 25x optical zoom.
- starlight+ technology.
- IR distance up to 100 m.
- Perimeter protection.
- Face detection.
- Video Metadata.
- SMD 4.0.
- IP68.
- Optical Fiber.



Starlight Technology

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

Privacy Protection

For public scenes, mosaics can be used in real time to block detected human faces or body parts on the monitoring screen while people are moving to protect the privacy of special groups.

Protection (IP68, TVS 6000 V)

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

PFA Technology

PFA technology has introduced new methods of judgment that ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms that ensure image clarity when zooming and that shorten focus time. This makes the camera highly advanced in its functions, substantially improving the quality of your experience.

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	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.001 lux@F1.6 B/W: 0.0001 lux@F1.6 0 lux (IR light on)
Illumination Distance	100 m (328.08 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off
Illuminator Number	4 (IR)

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×
Focus Control	Auto; semi-auto; manual
Close Focus Distance	0.1 m–2 m (0.33 ft–6.56 ft)
Iris Control	Auto; manual

PTZ

Preset	300
Power-off Memory	Yes
Idle Motion	Preset

Intelligence

Video Metadata	Motor vehicle, non-motor vehicle, face, and human body detection; tracking; optimization; capturing pictures; uploading high-quality snapshots; extracting 10 attributes from vehicles
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering
Face Detection	Supports face detection, face bounding box, optimization, capturing snapshots, enhancing face images, and uploading high-quality face snapshots, and extracts 6 attributes and 8 expressions from face images. 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, optimization and quality first.
SMD	Yes
Quick Pick	Yes

Video

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; H.264B; H.264H; MJPEG (Sub Stream)
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 3M (2048 × 1536); 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 (2048 × 1536)/3M (2304 × 1296)/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	H.264: 96 kbps–14848 kbps H.265: 38 kbps–8960 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
WDR	140 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 (EIS)
Defog	Electronic
Digital Zoom	16×
Image Rotation	180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view; multiple colors 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; NFS
Interoperability	GB/T2+AS38181; ONVIF (Profile S&G&T); CGI; GA/T 1400; SDK; IMOU
Streaming Method	Unicast; Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	FTP/SFTP; Micro SD card (512 GB); 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 60079-0/EN 60079-1/EN 60079-28/EN 60079-31 IECEx: IEC 60079-0/IEC 60079-1/EN 60079-28/IEC 60079-31 CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4- 2014
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Port

RS-485	1 (baud rate: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
Alarm Linkage	Capture; preset; pattern; tour; recording; send email; alarm digital input; 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)
Alarm I/O	2/1
Audio I/O	1/1

Power

Power Supply	Voltage: 100–240 VAC Current: 1 A Frequency: 50 Hz/60 Hz
Power Consumption	Basic: 10 W Max: 18.5 W (illuminator + optical fiber communication)

Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	≤95%
Protection	IP68, TVS 6000 V lightning proof; surge protection; voltage transient protection
Anti-corrosion Level	Basic Protection *The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection.

Structure

Casing Material	Stainless steel
Product Dimensions	458.7 mm × 161.0 mm × 265.1 mm (18.06" × 6.34" × 10.44")
Net Weight	11 kg (24.25 lb)
Gross Weight	16 kg (35.27 lb)

Ordering Information

Type	Model	Description
4MP WizMind EXPLOSION-PROOF CAMERA	DH-ECA7A1425-HNR-XA-F	4MP 25x Starlight IR EXPLOSION-PROOF CAMERA
Accessories (Optional)	DH-EXB100	Wall Mount Bracket
	DH-ZAZ100W	Mount Adapter
	CZ300	Junction Box (ATEX/IECEx)
	ZAEX02	Connector (ATEX/IECEx)
	ZANXG	Flexible Tube (ATEX/IECEx)
	PFA153	Column Mount

Accessories

Optional:



DH-EXB100
Wall Mount
Bracket



DH-ZAZ100W
Mount
Adapter



CZ300
Junction Box
(ATEX/IECEx)



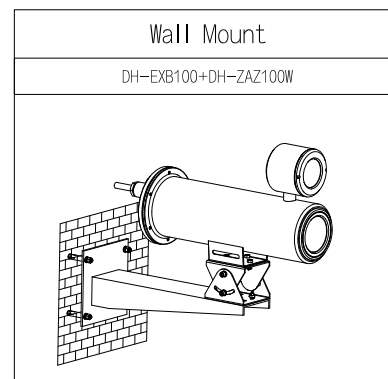
ZAEX02
Connector
(ATEX/IECEx)



ZANXG
Flexible Tube
(ATEX/IECEx)



PFA153
Column Mount



Dimensions (mm[inch])

