

DH-ESD41A415-HNR

4MP 15X Starlight Non Compensation Light Explosion-proof Camera



- 1/2.8" 4Megapixel STARVIS™ CMOS
- 15x optical zoom
- Max. 50/60fps@1080P
- Auto tracking 3.0
- Perimeter protection
- Face detection
- Video Metadata
- SMD 4.0
- IP68



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

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.

Protection (IP68, TVS 8000 V)

IP68, TVS 8000 V lightning proof, surge protection, and voltage transient protection.

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.

Video Metadata

Metadata is information on the attributes of targets that is extracted during monitoring. It can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind cameras: Human face, human body, motor vehicle and non-motor vehicle. Face information includes gender, age, glasses, masks, beards, and more. Human body information includes hat, top, top color, bottom, bottom color, bag, and more. Motor vehicle information includes plate color, type, vehicle color, sun visor, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

Technical Specification

Camera	
Image Sensor	1/2.8" CMOS
Pixel	4 MP
Max. Resolution	2688 (H) × 1520 (V)
ROM	4 GB
RAM	1 GB
Electronic Shutter Speed	1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	0.05 lux@F1.6 (Color, 30 IRE); 0.005 lux@F1.6 (B/W, 30 IRE);
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off

Lens											
Focal Length	4.77 mm–70.4 mm										
Max. Aperture	F1.6–F2.8										
Field of View	4.77 mm–70.4 mm: H: 60.4°–4.3°; V: 34.5°–2.4°; D: 68.5°–5°										
Optical Zoom	15 ×										
Focus Control	Auto; semi-auto; manual										
Close Focus Distance	4.77 mm–70.4 mm: 1 m–1.5 m (3.28 ft–4.92 ft)										
Iris Control	Auto; manual; iris prio										
	<table border="1"> <thead> <tr> <th>Lens</th> <th>Detect</th> <th>Observe</th> <th>Recognize</th> <th>Identify</th> </tr> </thead> <tbody> <tr> <td>4.77 mm–70.4 mm</td> <td>6700 m (21981.63 ft)</td> <td>2646.5 m (8682.74 ft)</td> <td>1340 m (4396.33 ft)</td> <td>670 m (2198.16 ft)</td> </tr> </tbody> </table>	Lens	Detect	Observe	Recognize	Identify	4.77 mm–70.4 mm	6700 m (21981.63 ft)	2646.5 m (8682.74 ft)	1340 m (4396.33 ft)	670 m (2198.16 ft)
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PTZ	
Pan/Tilt Range	Pan: 0° to 360° endless; Tilt: 0° to +90°, auto flip 180°;
Manual Control Speed	Pan: 0.1°/s–130°/s; Tilt: 0.1°/s–57°/s
Preset Speed	Pan: 0.1°/s–280°/s; Tilt: 0.1°/s–216°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Preset; Pattern; Tour; Scan
PTZ Protocol	DH-SD; Pelco-P/D (auto recognition)

Intelligence	
Video Metadata	Supports detection of motor vehicles, non-motor vehicles, faces and human bodies, tracking, optimization, capturing pictures, and uploading high-

	quality face snapshots. It extracts attributes from motor vehicles, detecting up to 10 attributes for them.
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage 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.
Auto Tracking	Auto tracking 3.0
SMD	SMD 4.0
Quick Pick	Yes

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 (2048 × 1536); 3M (2304 × 1296); 1080P (1920 × 1080); 720P (1280 × 720); 1.3M (1280 × 960); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4M/3M/2304x1296/1080p/960p/720p@(1–25/30 fps) Sub stream 1: D1/VGA/CIF@(1–25/30 fps) Sub stream 2: 1080p/960p/720p@(1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 96 Kbps–14,848 Kbps H.265: 38 Kbps–8,960 Kbps
Day/Night	Auto; Color; B/W; Electronic
BLC	Yes
WDR	120dB
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual; gain prio
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic Image Stabilization (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	54 dB
Audio	
Audio Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
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	ONVIF (Profile S & Profile G & Profile T);CGI;Dahua SDK;API
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	Smart PSS;DSS;DMSS;Easy4ip;IVSS;ConfigTool;NVR;Smart Player ;Cloud Connection
Mobile Client	iOS;Android
Certification	
Certifications	CE-LVD : DHQA-ESH-P23091306 CE-EMC: DHQA-ESH-P23081500B IECEX/ATEX : IECEX TUR 23.0005X/TüV 23 ATEX 8955 X
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 Input	2 (on-off value input: 0–5 VDC)
Alarm Output	1 channel
Alarm Linkage	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
Power	
Power Supply	100 VAC–240 VAC; PoE (802.3at)
Power Consumption	Basic: 16 W; Max: 19 W (PTZ)
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
Structure	
Casing Material	SUS304 SUS316L
Product Dimensions	277.4 mm × Φ184 mm (10.92" × Φ7.24")
Net Weight	7.0 kg (15.43 lb)
Gross Weight	9.5 kg (20.94 lb)
Filter	
Remarks	When the vertical field of view is between 0° and 6°, the image might present different degrees of ghosting.

Ordering Information

Type	Model	Description
Explosion-proof Camera	DH-ESD41A415-HNR	4MP 15X Starlight Non Compensation Light Explosion-proof Camera
Accessories	DH-SDPJ009	Wall Mount Bracket

Accessories

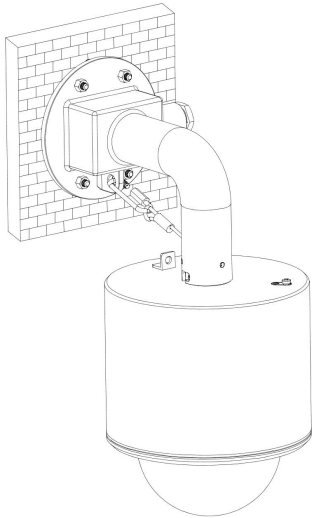
Included:



DH-SDPJ009
Wall Mount Bracket

Wall Mount

DH-SDPJ009



Dimensions (mm[inch])

