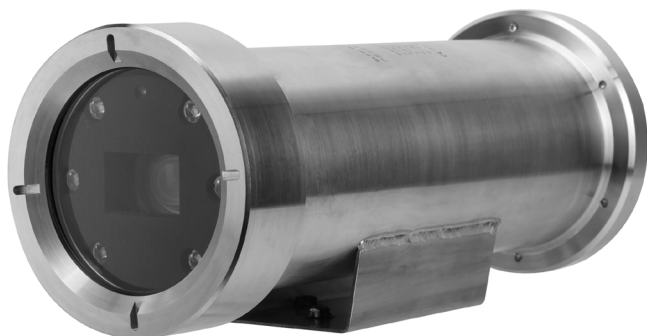


Explosion-protected Network Camera

2 MP 30x Starlight H.265 IR Network Camera



- 1/2.8-in. 2 MP STARVIS™ CMOS Sensor
- Powerful 30x Optical Zoom
- Starlight Technology for Ultra-low Light Sensitivity
- Triple-stream Encoding
- Smart H.265+ and H.264 Dual Codecs
- 1080p at 60 fps Maximum Resolution
- Intelligent Video System
- Maximum IR Distance 100 m (328 ft)
- 304 Stainless Steel Housing
- ATEX and IECEx Certifications
- Supports Hi-PoE
- IP68 Ingress Protection
- Five-year Warranty*



System Overview

The Dahua Explosion-protected Camera series features a powerful optical zoom lens and a rugged design that meets the ATEX and the IECEx standards. This camera series uses a 1/2.8-in. STARVIS™ CMOS imager with a 30x optical zoom lens, and provides an all-in-one solution for capturing long-distance video surveillance in critical environments. The camera uses the H.265 video compression standard to improve encoding efficiency while preserving high-quality video. The explosion-protected stainless steel camera is designed to prevent ignition of surrounding gasses or combustible dust, and is the ideal surveillance solution for use in the oil production, pipeline, refinery, chemical, and grain storage industries.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

True Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera detects and captures a snapshot of human face in a defined area within a scene, and offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Environmental

With a built-in heater and a temperature range of -40°C to $+60^{\circ}\text{C}$ (-40°F to $+140^{\circ}\text{F}$), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP68 rating makes it suitable for demanding outdoor applications.

Cybersecurity

Dahua network cameras are equipped with a series of key cybersecurity technologies including: security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage. These technologies improve the camera's ability to prevent malicious access and to protect data.

Protection

The camera allows for $\pm 25\%$ input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 2KV lightning rating provides effective protection for both the camera and its structure against lightning.

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) and PSIA (Physical Security Interoperability Alliance) specifications, ensuring interoperability between network video products regardless of manufacturer.

Technical Specification

Camera

| | |
|--------------------------|---|
| Image Sensor | 1/2.8-in. STARVIS™ CMOS |
| Effective Pixels | 1920 (H) x 1080 (V), 2 MP |
| RAM/ROM | 512 MB / 128 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | 1/1 s to 1/30,000 s |
| Minimum Illumination | Color: 0.005 lux at F1.6 0 lux at F1.6 (IR on) |
| S/N Ratio | More than 55 dB |
| IR Distance | Up to 100.0 m (328.04 ft) |
| IR On/Off Control | Auto, Manual |
| IR LEDs | Six (6) |

Lens

| | |
|----------------------|--|
| Focal Length | 4.5 mm to 135 mm |
| Max. Aperture | F1.6 to F4.4 |
| Angle of View | Horizontal: 67.8° to 2.4° |
| Optical Zoom | 30x |
| Focus Control | Auto, Manual |
| Close Focus Distance | 100 mm to 1000 mm (3.94 in. x 39.37 in.) |

DORI¹ Distance

| Detect | Observe | Recognize | Identify |
|------------------|-----------------|-----------------|----------------|
| 1862 m (6109 ft) | 744 m (2441 ft) | 372 m (1220 ft) | 186 m (610 ft) |

Video

| | |
|----------------------|---|
| Compression | Smart H.265+, H.265, Smart H.264+, H.264 |
| Streaming Capability | Three (3) Streams |
| Resolution | 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), CIF (352 x 240) |

| | |
|------------------------|---|
| Frame Rate | Main Stream: 1080p, 1.3 MP, 720p at 60 fps |
| | Sub Stream 1: D1/CIF at 30 fps |
| | Sub Stream 2: 1080p, 1.3 MP, 720p at 30 fps |
| Bit Rate Control | CBR/VBR |
| Bit Rate | H.265/H.264: 448K to 8192 Kbps |
| Day/Night | Auto (ICR), Color, B/W |
| Backlight Compensation | BLC, HLC, True WDR (120 dB) |
| White Balance | Auto, ATW, Indoor, Outdoor, Manual |
| Gain Control | Auto, Manual |
| Noise Reduction | Ultra DNR (2D/3D) |
| Advanced Features | Motion Detection, Region of Interest, Electronic Image Stabilization (EIS), Defog |
| Digital Zoom | 16x |
| Flip | 180° |



Audio

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|-------------|---|
| Compression | G.711a, G.711Mu, G.722, G.726, MPEG2-L2 |
|-------------|---|

Network

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|-------------------------|--|
| Ethernet | RJ45 (10 Base-T, 100 Base-TX) |
| Protocol | IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x |
| Interoperability | ONVIF, PSIA, CGI |
| Streaming Method | Unicast / Multicast |
| Maximum User Access | 20 Users |
| Edge Storage | Network Attached Storage (NAS), Local PC for instant recording, Micro SD Card Slot, maximum 128 GB |
| Web Viewer | IE, Chrome, Firefox, Safari |
| Management Software | SmartPSS, DSS |
| Mobile Operating System | iOS, Android |
| Cybersecurity | Video Encryption, Firmware Encryption, Configuration Encryption, Digest, WSSE, Account Lockout, Security Logs, IP/MAC Filtering, Generating and Importing X.509 Certification, Syslog, HTTPS, 802.1x, Trusted Boot, Trusted Execution, Trusted Upgrade |

Certifications

| | | |
|-------------------------------------|-------|--|
| Explosion-protection Standards | ATEX | EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-28:2015 EN 60079-31:2014 |
| | IECEX | IEC 60079-0:2011 IEC 60079-1:2014-06 IEC 60079-28:2015 IEC 60079-31:2013 |
| Explosion-protection Marking | ATEX |  II 2 G Ex db IIIC T6 Gb |
| | IECEX |  II 2 D Ex tb IIIC T80°C Db Ex db IIC T6 Gb, Ex db IIIC T80° Db |
| Safety | | UL 60950-1 CAN/CSA C22.2 No. 60950-1-07 |
| Electromagnetic Compatibility (EMC) | | 47 CFR FCC Part 15 Subpart B, ANSI C63.4-2014, EN55032, EN55024, EN50130-4 |

1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4, the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

Interface

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|-----------------|--|
| Video Interface | One (1) BNC Port (1.0 Vp-p), 75 Ω |
| RS485 | One (1) |
| Audio | Input: One (1) Channel Output: One (1) Channel |
| Alarm | Input: Two (2) Channels Output: One (1) Channel |

Electrical

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|-------------------|--|
| Power Supply | 220 VAC (100 VAC to 240 VAC) or Hi-PoE |
| Power Consumption | 10 W, 25 W with IR on |

Environmental

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|----------------------|---|
| Operating Conditions | -40° C to 60° C (-40° F to +140° F), Less than 95% RH |
| Ingress Protection | IP68 |

Construction

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|--------------|---|
| Casing | 304 Stainless Steel |
| Dimensions | 396.10 mm x 149.50 mm x 143.0 mm (15.59 in. x 5.89 x 5.63 in.) |
| Net Weight | 8.70 kg (19.18 lb) |
| Gross Weight | 10.40 kg (22.93 lb) |

Intelligence

IVS triggers an alarm and takes a defined action for the following events:

| | |
|-------------------|---|
| Standard Features | <ul style="list-style-type: none"> Tampering with the camera. Camera loses or changes focus drastically. Error writing to an onboard Micro SD card. Error sending or receiving data over the network. Unauthorized access to the camera. |
|-------------------|---|

Premium Features

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|--------------------------|--|
| Motion | An object moves through any part of the scene. |
| Tripwire | A target crosses a user-defined line. |
| Intrusion | A target enters or exits a defined perimeter. |
| Scene Change | A person or object moves the camera to change the scene or covers the camera to obscure the scene. |
| Abandoned/Missing Object | A target leaves an object in designated area, or a target removes an object from the same designated area. |

Advanced Features

| | |
|------------------|---|
| Facial Detection | Detects and captures a snapshot of a human face in a defined area within a scene. |
| Heat Map | Generates a visual representation of data. |

Ordering Information

| Type | Part Number | Description |
|---------------------------------|-------------|---|
| 2 MP Explosion-protected Camera | DH-EPC230U | 2 MP 30x Explosion-protected IR Network Bullet Camera, True WDR |
| Accessories, optional | DH-ZAZ100W | Mount Adapter |
| | DH-EXB100 | Wall Mount |
| | DH-ZA-JXD4 | Junction Box (ø227 mm) |
| | DH-ZAJ300 | Junction Box (ø376 mm) |
| | DH-GE1500 | Flexible Tube |

Accessories

Optional:



DH-ZAZ100W
Mount Adapter



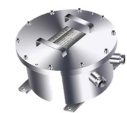
DH-EXB100
Wall Mount



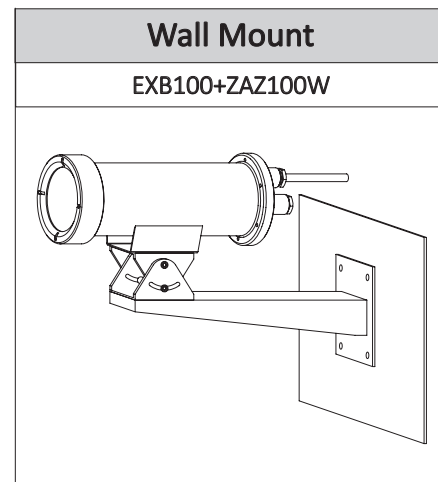
DH-GE1500
Flexible Tube



DH-ZA-JXD4
Junction Box



DH-ZAJ300
Junction Box



Dimensions (mm/in.)

