DH-EPC230U-PTZ

2MP 30x Explosion-proof Network Positioning System

- 1/2.8” 2Megapixel STARVIS™ CMOS
- Powerful 30x optical zoom
- 316L stainless steel housing
- Starlight technology
- H.265/H.264 Triple-stream Encoding
- Max. 50/60fps@1080P
- IP68

System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight technology, the camera is the perfect solution for dark, lowlight applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, and True WDR for applications with direct sunlight or glare.

Functions

Starlight Technology
For challenging low-light applications, Dahua’s Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color 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.

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.

Environmental
Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +60 °C (-40 °F to +140°F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP68 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection
The camera allows input voltage tolerance, suitable for the 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) specifications, ensuring interoperability between network video products regardless of manufacturer.

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2 Megapixels
RAM/ROM	512M/128M
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.005Lux@F1.6; B/W:0.0005Lux@F1.6
IR Distance	N/A
IR On/Off Control	N/A
IR LEDs	N/A
Wiper	Support

Lens

Focal Length	4.5mm~135mm
Max. Aperture	F1.6 ~ F4.4
Angle of View	H: 67.8° ~ 2.4°
Optical Zoom	30x
Focus Control	Auto/Manual
Close Focus Distance	100mm~ 1000mm

DORI Distance

*Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

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

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: -90° ~ 90°
Manual Control Speed	Pan: 0.1° ~40° /s; Tilt: 0.1° ~40° /s
Preset Speed	Pan: 40° /s; Tilt: 40° /s
Presets	256
PTZ Mode	5 Scan, 8 Tour
Speed Setup	Human-oriented focal Length/speed adaptation
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset/Scan/Tour if there is no command in the specified period
Protocol	DH-SD, Pelco-P/D (Auto recognition)

Video

Compression	H.265+/H.265/H.264+/H.264
Streaming Capability	3 Streams
Resolution	1080P(1920×1080)/1.3M(1280x960)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)
Frame Rate	Main stream: 1080P/1.3M/720P(1~50/60fps)
	Sub stream1: D1/CIF(1 ~ 25/30fps)
	Sub stream2: 1080P/1.3M/720P(1 ~ 25/30fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 448K ~ 8192Kbps
Day/Night	Auto(ICR) / Color / B/W
Backlight Compensation	BLC / HLC / WDR (120dB)
White Balance	Auto, ATW, Indoor, Outdoor, Manual
Gain Control	Auto / Manual
Noise Reduction	Ultra DNR (2D/3D)
Motion Detection	Support
Region of Interest	Support
Electronic Image Stabilization (EIS)	Support
Defog	Support
Digital Zoom	16x
Flip	180°

Audio

Compression	G.711a/G.711Mu/AAC/G.722/G.726/MPEG2-L2

Network

Ethernet	RJ-45 (10Base-T/100Base-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 Profile S&G, API
Streaming Method	Unicast / Multicast
Max. User Access	20 users
Edge Storage	NAS (Network Attached Storage),Local PC for instant recording, Micro SD card 256GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS, DMSS
Smart Phone	IOS, Android

Interface

Video Interface	1 port(BNC, 1.0V[p-p], 75Ω)
RS485	1
Audio I/O	1/1
Alarm I/O	2/1

Certifications	
Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB,ANSI C63.4- 2014 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
Explosion-proof Marking	ATEX: II 2 G Ex db IIC T6 Gb, II 2 D Ex tb IIIC T80°C Db IECEx : Ex db IIC T6 Gb, Ex tb IIIC T80°C Db
Electrical	
Power Supply	AC220V(AC100V ~ 240V)
Power Consumption	35W, 60W(Heater on)
Environmental	
Operating Conditions	-40°C ~ 60°C (-40°F ~ +140°F) / Less than 95% RH
Ingress Protection	IP68
Vandal Resistance	N/A
Construction	
Casing	316L Stainless Steel
Dimensions	Φ316mm×358mm×285mm
Net Weight	23.3kg(51.37lb)
Gross Weight	27.5kg(60.63lb)

Ordering Information

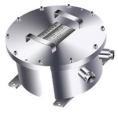
Type	Part Number	Description
2MP PTositioning System	DH-EPC230U-PTZ	2MP 30x Explosion-proof Network Positioning System, WDR, PAL
	DH-EPC230UN-PTZ	2MP 30x Explosion-proof Network Positioning System, WDR, NTSC
Accessories	DH-ZAZ660B	Wall Mount
	DH-ZA-JXD4	Junction Box (ϕ227mm x 84mm)
	DH-ZAJ300	Junction Box (ϕ376mm x 175mm)
	DH-GE1500	Flexible Tube

Accessories

Optional:

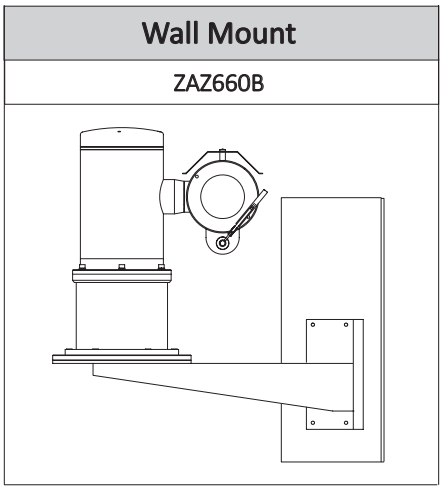
DH-ZAZ660B
Wall Mount

DH-ZA-JXD4
Junction Box

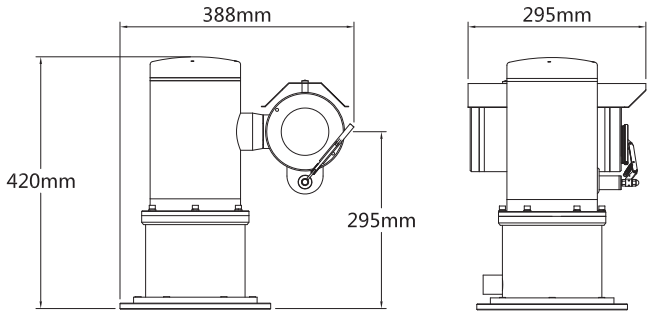


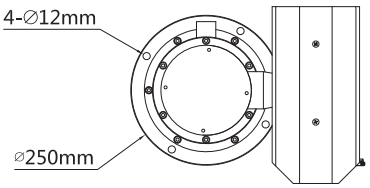
DH-ZAJ300
Junction Box

DH-GE1500
Flexible Tube



Dimensions (mm)





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