

Corrosion-resistant PTZ Network Camera

2 MP 30x Starlight PTZ Network Camera



- 1/1.9-in. 2 MP STARVIS™ CMOS
- Powerful 30x Optical Zoom
- 316L Corrosion-resistant Stainless Steel Housing
- Starlight Technology for Low Light Sensitivity
- Triple-stream Encoding
- Smart H.265+ and H.264 Dual Compression
- 1080p at 60 fps
- True Wide Dynamic Range (120 dB) and Day/Night IR Cut Filter
- Designed for Extreme Temperature Environments
- IP68 Ingress Protection, IK10 Impact Protection and NEMA 4X
- PoE+ Support
- Five-year Warranty*



System Overview

The Ultra Series Camera offers high-performance video and cutting-edge technology in a compact and accessible package. The 316L stainless steel housing, along with IP68 and IK10 ratings, protects the camera in corrosive and harsh environments. The camera features Smart H.265+ video compression, reducing bandwidth and storage requirements without sacrificing video quality. The camera series incorporates True Wide Dynamic Range and Intelligent Video Analysis.

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

For applications with both bright and low-light 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.

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 supports face detection to quickly capture a face and upload the image to a server. The camera also offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera. The built-in IVS features people counting and heat map functionality, advanced features that add business intelligence to your security system.

Auto-tracking

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the target automatically.

High Efficiency Video Coding (H.265)

The H.265 (ITU-T VCEG) video compression standard offers double the data compression ratio at the same level of video quality, or substantially improved video quality at the same bit rate, as compared to older video compression technologies. H.265 offers such impressive compression by expanding the pattern comparison and difference-coding, improving motion vector prediction and motion region merging, and incorporating an additional filtering step called sample-adaptive offset filtering.

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.

Environmental

With a built-in heater and a temperature range of -40°C to $+70^{\circ}\text{C}$ (-40°F to $+158^{\circ}\text{F}$), the camera is designed for extreme temperature environments. The camera complies with an IK10 impact rating making it capable of withstanding 20 J of force, the equivalent of 5 kg (11.02 lbs) of dropped from a height of 40 cm (15.75 in.). Subjected and certified to rigorous dust and water immersion tests, the IP68 rating makes it suitable for demanding outdoor applications. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

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 1/300,000 s
Minimum Illumination	Color: 0.005 lux at F1.6 B/W: 0.0005 lux at F1.6
S/N Ratio	More than 55 dB

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)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: -20° to 90° Auto-flip 180°
Manual Control Speed	Pan: 0.1° to 300° /s; Tilt: 0.1° to 200° /s
Preset Speed	Pan: 600° /s; Tilt: 500° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan, Auto Scan
Speed Setup	Proportional Pan/Tilt Speed to Zoom Ratio
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset, Scan, Tour, Pattern if there is no command in the specified period
Protocol	DH-SD, Pelco-P/D (Auto recognition)

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, or 720p at 60 fps Sub Stream 1: D1 or CIF at 30 fps Sub Stream 2: 1080p, 1.3 MP, 720p, D1, or CIF at 30 fps
Bit Rate Control	CBR, VBR
Bit Rate	H.265/H.264: 448 K 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°
Privacy Masking	Up to 24 areas

Audio

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

Ethernet	RJ-45 (10/100 Base-T)
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

Safety	UL 60950-1 + CAN/CSA C22.2, No.60950-1
Electromagnetic Compatibility (EMC)	EN55032, EN55024, EN50130-4 FCC Part 15 Subpart B ANSI C63.4- 2014

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

Video	Output: One (1), BNC
Audio	Input: One (1) Channel Output: One (1) Channel
RS485	One (1) Port
Alarm	Input: Seven (7) Channels Output: Two (2) Channels

Electrical

Power Supply	24 VAC, 3 A (±25%) or PoE+ (802.3at Class 4)
Power Consumption	13 W, 20 W with Heater on

Environmental

Operating Conditions	-40° C to 70° C (-40° F to +158° F), Less than 90% RH
Ingress Protection	IP68
Impact Protection	IK10

Construction

Housing	316L Stainless Steel
Dimensions	ø222.0 mm x 292.0 mm (8.74 in. x 11.50 in.)
Net Weight	5.90 kg (13.01 lb)
Gross Weight	11.0 kg (24.25 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	
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	
Auto-tracking	Controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene.

Ordering Information

Type	Part Number	Description
2 MP PTZ Camera	DH-SD60230UN-HNI-SL	2 MP 30x Corrosion-resistant PTZ Network Camera, True WDR, IVS
Accessories, included	AC 24V/3A	Power Adapter
	PFB303W-SL	Wall Mount

Accessories

Included:



AC 24V/3A Power Adapter



PFB303W-SL Wall Mount

Dimensions (mm)

