

2 MP Starlight Dome Camera

WDR IR Dome Network Camera



System Overview

Dahua's Pro series of cameras offers high-resolution video and cutting-edge technology in a compact and accessible package. The cameras feature H.265 video compression, reducing bandwidth and storage requirements without sacrificing video quality. The camera series incorporates True Wide Dynamic Range, Smart IR, and the optional Intelligent Video Analysis, features typically found on high-end surveillance systems. This series provides a rugged enclosure rated to the IP67 and to the IK10 standards to protect your security investment.

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 0.006 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

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.

Street Light Compensation

The camera delivers exceptional images even when shooting under sodium-vapor lamps that typically add a yellowish-tint to the scene hampering identification. This camera provides a built-in white-balance mode that compensates for the tint to restore the scene to its original color.

1. Firmware update required for Smart H.265+ support. Firmware available January 2017.

- 1/2.8-in. 2 MP Progressive Scan Exmor CMOS
- Triple-stream Encoding
- H.265 and H.264 Dual Codecs
- 1080p at 60 fps (1920 x 1080)
- Smart Detection Supported
- True Wide Dynamic Range (120 dB) and Day/Night IR Cut Filter
- 2.7 mm to 12 mm Motorized Lens
- Intelligent Video System with Facial Detection
- Alarm and Audio Inputs/Outputs
- Max. IR LED Length 50 m (164 ft)
- IP67 Ingress Protection and IK10 Vandal Resistance
- 5-year Warranty*



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.

Smart H.265+¹

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.264 video compression.

Smart IR

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 50 m (164 ft).

Environmental

With a temperature range of -30 °C to +60 °C (-22 °F to +140 °F), the camera is designed for extreme temperature environments. The camera complies with the IK10 Vandal Resistance impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.). Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

Supporting ±30% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.



Technical Specification

Camera

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|----------------------|--|
| Image Sensor | 1/2.8-in. 2 MP Progressive Scan CMOS |
| Effective Pixels | 1920(H) x 1080(V) |
| RAM/ROM | 256 MB / 32 MB |
| Scanning System | Progressive |
| Minimum Illumination | Color: 0.006 lux at F1.4 B/W: 0 lux at F1.4 (IR on) |
| S/N Ratio | More than 50 dB |
| IR Distance | Distance up to 50 m (164.04 ft) |
| IR On/Off Control | Auto, Manual |
| IR LEDs | Three (3) |

Lens

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|----------------------|--|
| Lens Type | Motorized / Auto Iris (DC) |
| Mount Type | Board-in |
| Focal Length | 2.7 mm to 12 mm |
| Max. Aperture | F1.4 |
| Angle of View | Horizontal: 97° to 34° Vertical: 52° to 20° |
| Optical Zoom | 4x |
| Focus Control | Motorized |
| Close Focus Distance | 0.30 m (0.98 ft) |

Pan/Tilt/Rotation

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|-------|--|
| Range | Pan: 0° to 355° Tilt: 0° to 65° Rotation: 0° to 355° |
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Video

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|----------------------|---|
| Compression | Smart H.265 ¹ , 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), VGA (640 x 480), CIF (352 x 240) |
| Frame Rate | Main Stream: 1080p at 60 fps |
| | Sub Stream 1: D1 at 60 fps |
| | Sub Stream 2: 1080p at 30 fps |
| Bit Rate Control | CBR/VBR |
| Bit Rate | H.264: 24 to 9472 Kbps H.265: 14 to 5632 Kbps |
| Day/Night | Auto (ICR), Color, B/W |
| BLC Mode | BLC, HLC, WDR (120 dB) |

1. Firmware update required for Smart H.265+ support. Firmware available January 2017.

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|--------------------|---|
| White Balance | Auto, Natural, Street Lamp, Outdoor, Manual |
| Gain Control | Auto, Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | Off, On (4 Zone, Rectangle) |
| Region of Interest | Off, On (4 Zone) |
| Smart IR | Support |
| Digital Zoom | 16x |
| Flip | 0° / 90° / 180° / 270° |
| Mirror | Off, On |
| Privacy Masking | Off, On (4 Area, Rectangle) |

Audio

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|-------------|-----------------------------|
| Compression | G.711a, G.711Mu, AAC, G.726 |
|-------------|-----------------------------|

Network

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|-------------------------|--|
| Ethernet | RJ-45 (10/100 Base-T) |
| Protocol | HTTP, HTTPS, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP |
| Interoperability | ONVIF, PSIA, CGI |
| Streaming Method | Unicast / Multicast |
| Max. User Access | 10 Users / 20 Users |
| Edge Storage | NAS Local PC for Instant Recording MicroSD Card, maximum 128 GB |
| Web Viewer | IE, Firefox, Safari |
| Management Software | Smart PSS, DSS |
| Mobile Operating System | IOS, Android |

Certifications

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|-------------------------------|-----------------------|
| Safety | UL60950-1 |
| Electromagnetic Compatibility | FCC Part 15 Subpart B |

Interface

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|-----------------|--|
| Audio Interface | In: One (1) Channel Out: One (1) Channel |
| Alarm | In: One (1) Channels Out: One (1) Channel |

Electrical

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|-------------------|--------------------------------------|
| Power Supply | DC12V, AC24V, PoE (802.3af, Class 0) |
| Power Consumption | < 12.5 W |

Environmental

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|----------------------|---|
| Operating Conditions | -30° C to +60° C (-22° F to +140° F), Less than 95% RH |
| Storage Conditions | -30° C to +60° C (-22° F to +140° F), Less than 95% RH |
| Ingress Protection | IP67 |
| Vandal Resistance | IK10 |

Construction

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|--------------|---|
| Casing | Metal |
| Dimensions | Φ159.10 mm x 117.90 mm (Φ6.26 in. x 4.64 in.) |
| Net Weight | 0.89 kg (1.96 lb) |
| Gross Weight | 1.13 kg (2.49 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. 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 | |
| Facial Detection | Detects and captures a snapshot of human face in a defined area within a scene. |

Accessories

Optional:



PFA101
Mount Adapter



PFB300C
Ceiling Mount



PFA138
Junction Box



PFB201C
In-ceiling Mount



PFB302S
Wall Mount

| In-ceiling Mount | Junction Mount | Pole Mount |
|--|---------------------------------------|---------------------------|
| PFA101 + PFB201C | PFA138 | PFA101 + PFB302S + PFA138 |
| | | |
| Ceiling Mount PFA101 + PFB300C | Wall Mount PFA101 + PFB302S | |
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Ordering Information

| Type | Part Number | Description |
|------------------------|-------------|---------------------------------------|
| 2 MP Camera | N25BL5Z | 2 MP IR Dome Network Camera, WDR, IVS |
| Accessories (optional) | PFB302S | Wall mount |
| | PFA138 | Junction box |
| | PFB201C | In-ceiling mount |
| | PFA152 | Pole mount |
| | PFA101 | Mount adapter |

Dimensions (mm/inch)

