DAHUA TECHNOLOGY

2 MP PTZ Network Camera
30x Starlight IR PTZ 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
- True Wide Dynamic Range (120 dB)
- Maximum IR Distance up to 200 m (656 ft)
- Intelligent Video System (IVS) Analytics with Auto-tracking
- IP67 Ingress Protection and IK10 Vandal Resistance
- Designed for Extreme Temperature Environments
- Five-year Warranty*

System Overview

The 2 MP IR PTZ Dome camera features 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 for outdoor applications. The camera uses the Smart H.265+ video compression standard to improve encoding efficiency while preserving high-quality video. The PTZ camera a day/night mechanical IR cut filter and True Wide Dynamic Range to deliver crystal clear images in challenging lighting conditions.

Functions

Starlight Technology
For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers light sensitivity that captures 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.

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 defined target automatically.

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 offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

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.

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

Environmental
With a built-in heater and a temperature range of −40° C to +70° C (−40° F to 158° 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.

ONVIF **PSIA**

*Warranty applies to products sold through an authorized Dahua Dealer.

Technical Specification

Camera

Image Sensor	1/2.8-in. STARVIS™ CMOS Sensor
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 1/30,00 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	Distance up to 200 m (656.17 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

DORI Distance[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
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 200° /s Tilt: 0.1° to 120° /s
Preset Speed	Pan: 300° /s Tilt: 200° /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, or 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

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, PCM, AAC, G.722, G.726, G.729, MPEG2-L2

Network

Ethernet	RJ-45 (10 Base T/1000 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	NAS (Network Attached Storage) Local PC for Instant Recording Micro SD Card Slot, maximum 128 GB
Web Viewer	IE 10, Firefox, Safari
Management Software	Smart PSS, DSS
Mobile Operating System	IOS, Android

Certifications

Safety	UL60950-1 + CAN/CSA C22.2, No.60950-1
Electromagnetic Compatibility (EMC)	EN 55032 EN 50130-4 FCC Part 15 Subpart B ANSI C63.4-2014
Immunity	EN 55024

Interface

Video	One (1) BNC (1.0 Vp-p, 75 Ω)
Audio	Input: One (1) Channel Output: One (1) Channel
RS485	One (1)
Alarm	Input: Seven (7) Channels Output: Two (2) Channels

Electrical

Power Supply	24 VAC, 3 A (± 25%), PoE+ (802.3at Class 4)
Power Consumption	17 W, 25 W with IR and Heater On

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.

Environmental

Operating Conditions	−40° C to 70° C (−40° F to +158° F), with built-in heater Less than 90% RH
Ingress Protection	IP67
Vandal Resistance	IK10
Lightning Protection Rating	6 kV

Construction

Casing	Metal
Dimensions	Ø209.0 mm x 337.40 mm (Ø8.23 in. x 13.28 in.)
Net Weight	5.80 kg (12.79 lb)
Gross Weight	9.10 kg (20.06 lb)

Intelligence

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

Standard Features	• 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	
Heat Map	Generates a visual representation of data.
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	6CE230UNI	2 MP 30x Starlight PTZ Network Camera, Built-in Heater, WDR, IVS
Accessories, included	PFB305W	Wall Mount
	AC24V/3A	Power Adapter
Accessories, optional	PFA111	Mount Adapter
	PFA120	Junction Box
	PFA140	Power Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	PFB300C	Ceiling Mount
	PFB303S	Parapet Mount

Accessories

Included:

PFB305W
Wall Mount

AC24V/3A
Power Adapter

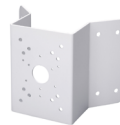Optional:

PFA111
Mount Adapter

PFA120
Junction Box

PFA140
Power Box

PFA150
Pole Mount

PFA151
Corner Mount

PFB300C
Ceiling Mount

PFB303S
Parapet Mount

Ceiling Mount	Junction Mount
PFA111 + PFB300C	PFB305W
Power Box Mount	**Pole Mount**
PFB305W + PFA140	PFB305W + PFA150
Corner Mount	**Parapet Mount**
PFB305W + PFA151	PFA111+ PFB303S

Dimensions (mm/in.)

Front view dimensions:
- 46.70 mm (1.84 in.)
- 21.0 mm (0.83 in.)
- 25.0 mm (0.98 in.)
- 146.0 mm (5.74 in.)
- 337.40 mm (13.28 in.)
- 166.40 mm (6.55 in.)
- 189.0 mm (6.26 in.)
- 209.0 mm (8.23 in.)

Side view dimensions:
- 154.20 mm (6.07 in.)