Dahua TECHNOLOGY

2MP Laser PTZ Network Camera
45x PTZ Network Camera

- 1/1.8-in. 2 MP Progressive-scan STARVIS™ CMOS Sensor
- Powerful 45x Optical Zoom Lens
- Smart H.265+ and H.264 Dual Codecs
- 2 MP at 60 fps Maximum Resolution
- Starlight Technology for Ultra Low-light Sensitivity
- Predictive Focus Algorithm
- Intelligent Video System with Auto-tracking
- Maximum IR Distance up to 550 m (1,804 ft)
- Supports Hi-PoE
- IP67 Environmental Protection
- Five-year Warranty*

| H.265 | WDR | 0.005 Lux | ICR D/N | IP67 | Hi-PoE |

System Overview

The 2MP Laser IR PTZ Dome camera features a 1/2.8-in STARVIS™ CMOS imager with a 5x 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 is equipped with quick and accurate pan/tilt/zoom control 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.

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.

PFA Technology

The camera uses innovative PFA Technology to improve zoom accuracy and to decrease focus time. A series of advanced algorithms more accurately judge the direction and the distance to a subject, improving picture clarity throughout the zooming process.

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.

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.

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

With a built-in heater and a temperature range of –40 °C to +60 °C (–40 °F to +140 °F), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP67 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
Effective Pixels	1920(H) x 1080(V), 2 MP
RAM/ROM	1024 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 with IR on
S/N Ratio	More than 56 dB
IR Distance	Distance up to 550 m (1804.46 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Laser Module

Lens

Focal Length	3.95 mm to 177.7 mm
Max. Aperture	F1.6 to F4.95
Angle of View	Horizontal: 70.3° to 1.8°
Optical Zoom	45x
Focus Control	Auto, Manual
Close Focus Distance	100 mm to 1000 mm

DORI Distance[1]

Detect	Observe	Recognize	Identify
2345 m (7694 ft)	938 m (3077 ft)	469 m (1539 ft)	234 m (768 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: 240° /s; Tilt: 200° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan ,Auto Scan
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/ 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 380), CIF (352 x 240)

Frame Rate	Main Stream	1080p, 1.3 MP or 720p at 60 fps
	Sub Stream 1	D1, 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, AAC, G.722, G.726, G.729, MPEG2-L2

Network

Ethernet	RJ45 (1000 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
Max. User Access	20 users
Edge Storage	NAS (Network Attached Storage) Local PC for instant recording Micro SD Car, maximum 128 GB
Web Viewer	IE 10, Firefox, Safari
Management Software	Smart PSS, DSS
Mobile Operating System	IOS, Android

Certifications

CE	EN55032 EN55024 EN50130-4
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B ANSI C63.4- 2014

Interface

Video Interface	One (1) BNC (1.0 Vp-p, 75 Ω)
Audio Interface	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%), Hi-PoE
Power Consumption	24 W, 38 W with IR on

1. The DORI distance is a general proximity of distance helping to pinpoint the correct camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify.

Environmental

Operating Conditions	−40° C to 60° C (−40° F to +140° F) Less than 90% RH
Ingress Protection	IP67
Lightning Protection	8KV

Construction

Casing	Metal
Dimensions	ø240.0 mm x 357.0 mm (ø9.45 in. x 14.06 in.)
Net Weight	6.75 kg (14.88 lb)
Gross Weight	10.50 kg (23.15 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

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.
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	6AL245UNI	2 MP 45x Laser PTZ Network Camera
Accessories, Included	PFA111	Mount Adapter
	PFB303W	Wall Mount
	AC24V/3A	Power Adapter
Accessories, Optional	PFA120	Junction Box
	PFA140	Power Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	PFB300C	Ceiling Mount
	PFB303S	Parapet Mount

Accessories

Included:

PFB303W Wall Mount	PFA111 Mount Adapter	AC24V/3A Power Adapter

Optional：

PFA140 Power Box	PFB300C Ceiling Mount	PFA120 Junction Box
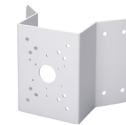
PFA150 Pole Mount	PFA151 Corner Mount	PFB303S Parapet Mount

Ceiling Mount	Junction Mount
PFA111 + PFB300C	PFA111 + PFB303W + PFA120
Power Box Mount	**Pole Mount**
PFA111 + PFB303W + PFA140	PFA111 + PFB303W + PFA150
Corner Mount	**Parapet Mount**
PFA111 + PFB303W + PFA151	PFA111+ PFB303S

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Dimensions (mm/in.)

46.30 mm
(1.82 in.)

174.0 mm
(6.85 in.)

357.0 mm
(14.06 in.)

158.0 mm
(6.22 in.)

214.0 mm
(8.43 in.)

240.0 mm
(9.45 in.)