DH-PTZ85448-HNF-PA

4MP 48x Starlight IR WizMind Network Positioning System



- 1/1.8" 4Megapixel STARVIS™ CMOS
- 48× optical zoom
- Starlight technology
- Max. 50/60 fps@4M
- IR distance up to 400 m
- H.265 encoding
- Two-way audio
- IP67
- Auto-tracking
- Perimeter protection
- face recognition



System Overview

AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, and traffic data statistics. The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

Functions

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve alarm accuracy.

Starlight Technology

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology offers the best in light sensitivity, capturing color in vivid detail, even in lighting as low as 0.001 lux. The camera uses a set of optical features to balance light throughout the scene, producing clear images in dark environments.

PFA Technology

PFA technology has introduced new methods of judgment that ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms that ensure image clarity when zooming and that shorten focus time. This makes the camera highly advanced in its functions, substantially improving the quality of your experience.

Environment (–40 °C to +70 °C, IP67)

Developed to operate in extreme conditions, Dahua camera can function in temperatures ranging from –40 °C to +70 °C (–40 °F to +158 °F) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP67 Ingress Protection certification, making it suitable for demanding outdoor applications.

Auto-tracking

This feature controls the pan, tilt and zoom actions of the camera to automatically track an object in motion, to keep it in view of the camera. Tracking 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, a flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality videos without straining the network. Smart H.265+ technology outranks standard H.265 video compression, reducing bit rate and storage requirements by up to 70%.

Scenes

The Dahua PTZ AI network camera adopts advanced CNN deep learning algorithms to support Perimeter Protection. This highly accurate camera possesses a wide monitoring range and the PFA algorithm, allowing it to always present a clear, focused image while zooming. Leveraging the latest in starlight technology, the camera has strong low light performance, smooth controls, high-grade protection, and produces high quality images, meeting most of the requirements of video surveillance applications.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	8 GB
RAM	2 GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.001 lux@F1.4 B/W: 0.0001 lux@F1.4 0 lux (IR light on)
Illumination Distance	400 m (1,312.34 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Off
Illuminator Number	8 (IR)
Wiper	Yes

Lens

Focal Length	6.25 mm–300 mm			
Max. Aperture	F1.4–F4.5			
Field of View	H: 62.4°–1.7°; V: 36.6°–1.0°; D: 69.8°–2.0°			
Optical Zoom	48×			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.5 m–2 m (1.64 ft–6.56 ft)			
Iris Control	Auto; manual			
DORI Distance	Detect	Observe	Recognize	Identify
	6,000 m (19,685.04 ft)	2,381 m (7,811.68 ft)	1,200 m (3,937.01 ft)	600 m (1,968.50 ft)
	*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.			

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –45° to +90°
Manual Control Speed	Pan: 0.1°/s–160°/s Tilt: 0.1°/s–60°/s"
Preset Speed	Pan: 160°/s; Tilt: 60°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Preset; Pattern; Tour; Scan
PTZ Protocol	DH-SD Pelco-P/D (auto recogniton)

Intelligence

Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.
IVS (Perimeter Protection)	Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.
Face Recognition	Yes

Video

Video Compression	H.265; H.264M; H.264H; MJPEG; Smart H.265; Smart H.264
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4M/1080p/960p/720p (1–50/60 fps) Sub stream 1: D1/VGA/CIF (1–25/30 fps) Sub stream 2: 1080p/960p/720p (1–25/30 fps)
Bit Rate Control	CBR; VBR
Video Bit Rate	H264: 512–13056 kbps H265: 204–7936 kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	140 dB
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Defog	Optical
Image Stabilization	Electronic Image Stabilization (EIS)
Digital Zoom	16×
Image Rotation	180°

Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view
S/N Ratio	≥55 dB

Audio

Audio Compression	G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; PCM

Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	HTTP; HTTPS; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; QoS; FTP; UPnP; ICMP; SNMP; IGMP; RTP; PPPoE; RTMP; TCP
Interoperability	ONVIF (Profle S&G&T); GB/T28181; CGI
Streaming Method	Unicast; Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	FTP; Micro SD card (512 GB); NAS
Browser	IE 7 and later versions Chrome 45 and later versions Firefox 52ESR and earlier versions Safari
Management Software	Smart PSS; DSS; IVSS
Mobile Client	iOS; Android

Port

Analog Output	1 channel (CVBS output, BNC)
RS-485	1 (baud rate: 1200 bps–115200 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
Two-way Audio	Yes
Alarm Input	7 (on-off value input: 0–5 VDC)
Alarm Output	2
Alarm Linkage	Capture; preset; tour; pattern; recordings on SD card; alarm digital input; client E-map; send email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; decoder state detection; memory card state detection; memory space detection; power exception detection

Power

Power Supply	36 VDC, 5 A (± 25%)
Power Consumption	Basic: 22 W Max.: 63 W (illuminator + wiper + PTZ)

Environment

Operating Temperature	–40 °C to +70 °C (–40 °F to 158 °F)
Operating Humidity	≤95%
Protection	IP67; TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Casing	ADC12
Product Dimensions	344.6 mm × 252.2 mm × 499.8 mm (13.57" × 9.93" × 19.68") (L × W × H)
Net Weight	15.4 kg (33.95 lb)
Gross Weight	23.7 kg (52.25 lb)

Ordering Information

Type	Part Number	Description
4M Camera	DH-PTZ85448-HNF-PA	4MP 48x Starlight IR WizMind Network Positioning System
	PTZ85448-HNF-PA	4MP 48x Starlight IR WizMind Network Positioning System
Accessories	DC36V/5A	Power Adapter
	DH-PFB741W	Wall Mount Bracket

Accessories

Included:

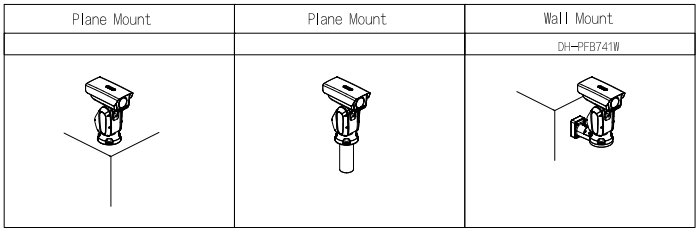


DC36V/5A
Power
Adapter

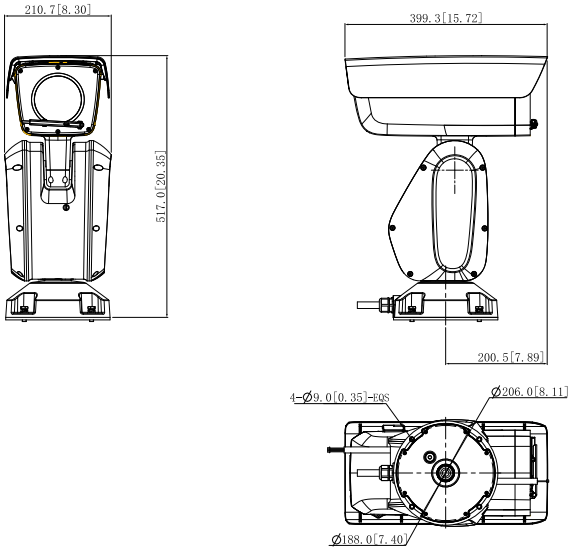
Optional:



DH-PFB741W
Wall Mount
Bracket



Dimensions (mm[inch])



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