

DH-SD4A216DB-HNY

2MP 16x WizSense NETWORK PTZ CAMERA



Wiz Sense

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

System Overview

With its powerful optical zoom, and accurate pan and tilt capabilities, the PTZ camera provides an all-in-one solution for long distance video surveillance of outdoor scenes. Together with infrared illumination and Starlight Technology, the camera is a great solution for dark, low light conditions. The series combines a day and night mechanical IR cut filter to produce high quality images in variable lighting conditions during the day.

Functions

Starlight Technology

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

Wide Dynamic Range

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

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.

- · 1/2.8" 2Megapixel STARVIS™ CMOS.
- · 16x optical zoom.
- · Starlight technology.
- · Max. 25/30fps@2MP.
- · IR distance up to 100 m.
- · Auto-tracking 1.0.
- · Perimeter protection.
- · Face detection.
- · SMD 3.0
- · IP66.













Auto-tracking 1.0

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.

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.

SMD

Empowered by Deep-Learning Algorithms, Dahua SMD filters out motion detection alarms triggered by targets that are not a concern. It quickly recognizes humans and vehicles, triggering alarms when an intrusion occurs.

Environment (-40 °C to +65 °C, IP66)

Developed to operate in extreme conditions, the camera can function in temperatures ranging from $-40\,^{\circ}\text{C}$ to $+65\,^{\circ}\text{C}$ ($-40\,^{\circ}\text{F}$ to $+149\,^{\circ}\text{F}$) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP66 Ingress Protection certification, making it suitable for demanding outdoor applications.

Precision	Technical Specification		Eaco Dotaction		
March 2466	Camera	mera		Face, one-inch photo. Capturing strategies include	
Max. Resolution	Image Sensor	1/2.8" CMOS	Auto Tracking	Yes	
AMM 128 MB Video Compression H.264H; H.264B; Stream; E.1.264; H.265 MIPEC (Sub-Stream); Smart H.264; H.266B; Stream; E.1.264; H.265 MIPEC (Sub-Stream); Smart H.264; H.266B; Stream; E.1.264; H.265 MIPEC (Sub-Stream); Smart H.264; H.266B; Stream; E.1.264 MIPEC (Sub-Stream); Smart H.264; H.266B; Stream; E.1.264 MIPEC (Sub-Stream); Smart H.264; H.266B; Stream; E.1.264 MIPEC (Sub-Stream); Smart H.264; H.266B; MIPEC (Sub-Stream); Smart H.264; H.265 MIPEC (Sub-Stream); Sub-Stream; Sub-Stream]; Sub-Stream; Sub-Stream, Sub-Stream H.264 MIPEC (Sub-Stream); Sub-Stream; Sub-Stream, Sub-Stream, Sub-Stream, Sub-Stream; Sub-Stream, Sub-Strea	Pixel	2MP	SMD	Yes	
Max	Max. Resolution	1920 × 1080	Video		
Secretaring Capability Screaming Capabili	ROM	128 MB	Video Compression	H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG	
Scanning System	RAM	512 MB	·		
Resolution Progressive Resolution 7700, D1 (701 x 7700,704 x 4800, CH (260 x 4800, CH (250 x 7800,704 x 4800, CH (250 x 7800, CH (250 x 78	Electronic Shutter Speed	1/1s~1/30000s	Streaming Capability		
Min. Illumination Sh/We 00005 law PE-16 Video frame Rate Video	Scanning System	Progressive	Resolution	720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF	
Note	Min. Illumination	B/W: 0.0005 lux@F1.6	Video Frame Rate	Sub stream 1: D1/VGA/CIF@ (1-25/30 fps)	
	Illumination Distance	100 m (328.08 ft) (IR)	Bit Rate Control	CBR/VBR	
Day/Night			Video Bit Rate		
Max. Aperture		6 (IR)	Day/Night	Auto (ICR)/Color/B/W	
Max. Aperture	Lens		BLC	Yes	
Field of View	Focal Length	5 mm-80 mm	WDR	120 dB	
Field of View N: 30.3"-2.6" White Balance Auto; indoor; at Ny; manual; sodium lamp; natural light; street lamp	Max. Aperture		HLC	Yes	
Noise Reduction 2D NR; 3D NR	Field of View	V: 30.3°-2.6°	White Balance		
Close Focus Distance Detect Observe Recognize Identify DORI Distance Detect Observe Recognize Identify 1,103.4 m 435.9 m 220.7 m 110.3 m (3,620.08 ft) (1,430.12 ft) (724.08 ft) (361.88 ft) PTZ Pan/Tilt Range Pan: 0° to 360° endless Tilt:—5° to +90°, auto flip 180° Manual Control Speed Pan: 240°/5; Tilt: 160°/5 Preset Speed Pan: 240°/5; Tilt: 160°/5 Preset 300 Tour 8 (up to 32 presets per tour) Pattern 5 Scan 5 Power-off Memory Yes Idle Motion Pattern; Preset; Scan; Tour PTZ Protocol DH-SD Intelligence Motion Detection Yes Region of Interest (RoI) Yes Image Stabilization Electronic (EIS) Defog Electronic 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; PC Network Network Port RJ-45 (10/100 Base-T) Network Protocol Unicast/Multicast Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; NS (Parlinear Protoction) Streaming Method Unicast/Multicast	Optical Zoom	16×	Gain Control	Auto; manual	
DORI Distance Detect Observe Recognize Identify	Focus Control	Auto; semi-auto; manual	Noise Reduction	2D NR; 3D NR	
DORI Distance 1,103.4 m (3,620.08 ft) (1,430.12 ft) (724.08 ft) (361.88 ft) PTZ Pan/Tilt Range Pan: 0* to 360* endless Tilt: −5* to +90*, auto flip 180* Manual Control Speed Pan: 0.1/5~240/5 Tilt: 0.1/5~160*/5 Preset Speed Pan: 240*/s; Tilt: 160*/s Preset 300 Tour 8 (up to 32 presets per tour) Pattern 5 Scan 5 Power-off Memory Yes Idle Motion Pattern;Preset;Scan;Tour PTZ Protocol DH-SD Image Stabilization Electronic Electronic Defog Electronic 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; PC Network Network Port PTP,RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPP06;NTP;FP96;DNTP;FP96;Bnnjour;IPv4;DNS;RTCP;PPP06;NTP;FP96;SNTP;SNMP7CP/PPD07s;UPPPAFS;ICM ;UDP;iGMPS;MB+HTP;SSL;DHCP;SMTP;SNMP7LP/P20 v3MMB:)Cos;RTSP;ARP Intelligence Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; Streaming Method Unicast/Multicast	Close Focus Distance	0.1 m-0.5 m (0.33 ft-1.64 ft)	Motion Detection	Yes	
1,103.4 m 435.9 m 220.7 m 110.3 m (361.88 ft) (724.08 ft) (724.08 ft) (361.88 ft)		Detect Observe Recognize Identify	Region of Interest (RoI)	Yes	
PTZ Pan/Tilt Range Pan: 0° to 360° endless Tilt: -5° to 490°, auto flip 180° Manual Control Speed Pan: 0.1'/s-240'/s Tilt: 0.1'/s-160'/s Preset Speed Pan: 240°/s; Tilt: 160°/s Preset 300 Pattern 5 Scan 5 Power-off Memory Idle Motion Pattern, Preset; Scan; Tour PTZ Protocol DH-SD Defog Electronic 16× Image Rotation 180° Privacy Masking Up to 24 areas can be set, with up to 8 areas in the same view 5/N Ratio 255 dB Audio Audio Audio Audio Compression G.711a; G.711Mu, G.726; MPEG2-Layer2; G722.1; PC Network Network Network Port RJ-45 (10/100 Base-T) FTP,RTMP;IPV6;Bonjour;IPV4;DNS;RTCP;PPPOE;NTP;EDMS;UPNP;NES;ICM ;UPNP;MES;ICM ;U	DORI Distance	·	Image Stabilization	Electronic (EIS)	
Pan/Tilt Range Pan: 0° to 360° endless Tilt: -5° to +90°, auto flip 180° Manual Control Speed Pan: 0.1°/s-240°/s Tilt: 0.1°/s-160°/s Preset Speed Pan: 240°/s; Tilt: 160°/s Preset 300 Tour 8 (up to 32 presets per tour) Pattern 5 Scan 5 Power-off Memory Yes Idle Motion Pattern; Preset; Scan; Tour Pattern; Preset; Scan; Tour Pattern; Preset; Scan; Tour Pattern; Protocol DH-SD Intelligence 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 2 55 dB Audio Audio Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Network Network Port RJ-45 (10/100 Base-T) FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTCP; PPP0E; NTP; TP; RDV1; Layer2; G722.1; PC Value Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; Interoperability CGI; SDK; ONVIF (Profile S&G&T); P2P	PT7	(3,020.061t) (1,430.121t) (724.061t) (301.861t)	Defog	Electronic	
Manual Control Speed Pan: 0.1°/s−240°/s Tilt: 0.1′/s−160°/s Image Rotation 180° Preset Speed Pan: 240°/s; Tilt: 160°/s Privacy Masking Up to 24 areas can be set, with up to 8 areas in the same view Preset 300 S/N Ratio ≥ 55 dB Tour 8 (up to 32 presets per tour) Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Pattern 5 Network Scan 5 Network Port RJ-45 (10/100 Base-T) Power-off Memory Yes FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP; TP;802.1x;HTTPs;SI,DHCP;SMTP;SI,CM ;UDP;IGMP;SMB;HTTP;SSI,DHCP;SMTP;SI,CM ;UDP;IGMP;SMB;HTTP;SSI,DHCP;SMTP;SNMPv1/v2c v3(MIB-2);Qos;RTSP;ARP Intelligence Interoperability CGI;SDK;ONVIF (Profile S&G&T);P2P INS (Perimeter Protection) Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; Streaming Method Unicast/Multicast		Pan: 0° to 360° endless	Digital Zoom	16×	
Privacy Masking S/N Ratio ≥ 55 dB Audio Audio Audio Compression Scan 5 Network Scan 5 Network Network Network Port RJ-45 (10/100 Base-T) Privacy Masking Privacy Masking S/N Ratio ≥ 55 dB Audio Audio Compression Network Network Network Network Network Privacy Masking S/N Ratio ≥ 55 dB Audio Audio Audio Compression Network Network Network Network Network Port RJ-45 (10/100 Base-T) FTP;RTMP;IPV6;Bonjour;IPV4;DNS;RTCP;PPP0E;NTP;F TP;802.1x;HTTP;SSNMP;TCP/IP;DDNS;UPnP;NFS;ICM ;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPV1/v2c v3(MiB-2);Qos;RTSP;ARP Interoperability CGI;SDK;ONVIF (Profile S&G&T);P2P Streaming Method Unicast/Multicast	Pan/Tilt Range		Image Rotation	180°	
Preset 300 Tour 8 (up to 32 presets per tour) Pattern 5 Scan 5 Power-off Memory Yes Idle Motion Pattern;Preset;Scan;Tour PTZ Protocol DH-SD Intelligence S/N Ratio ≥ 55 dB Audio Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Network Network Port RJ-45 (10/100 Base-T) FTP;RTMP;IPV6;Bonjour;IPV4;DNS;RTCP;PPPoE;NTP;FTP;RMP;IPV6;Bonjour;IPV4;DNS;RTCP;PPPoE;NTP;IPV6;Bonjour;IPV4;DNS;RTCP;PPPoE;NTP;IPV6;Bonjour;IPV4;D	Manual Control Speed	Tilt: 0.1°/s–160°/s	Privacy Masking		
Audio Tour 8 (up to 32 presets per tour) Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Network Network Network Port RJ-45 (10/100 Base-T) FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP;F TP;802.1x;HTTP;SSNMP;TCP/IP;DDNS;UPnP;NFS;ICM ;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPv1/v2c v3(MIB-2);Qos;RTSP;ARP Interoperability CGI;SDK;ONVIF (Profile S&G&T);P2P Interoperability Streaming Method Unicast/Multicast	Preset Speed	Pan: 240°/s; Tilt: 160°/s	S/N Ratio	≥ 55 dB	
Pattern 5 Scan 5 Power-off Memory Yes Idle Motion Pattern; Preset; Scan; Tour PTZ Protocol DH-SD Intelligence Audio Compression G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PC Network Network Port RJ-45 (10/100 Base-T) FTP; RTMP; IPV6; Bonjour; IPV4; DNS; RTCP; PPPOE; NTP; FTP; RTMP; IPV6; Bonjour; IPV4; DNS; RTCP; PPPOE; NTP; FTP; RO2.1x; HTTPS; SNMP; TCP/IP; DNS; UPNP; NFS; ICM; UDP; IGMP; SMB; HTTP; SSL; DHCP; SMTP; SNMPV1/v2c v3(MIB-2); Qos; RTSP; ARP Interoperability CGI; SDK; ONVIF (Profile S&G&T); P2P Interoperability Streaming Method Unicast/Multicast	Preset	300	Audio	Audio	
Network Scan 5 Power-off Memory Yes Idle Motion Pattern;Preset;Scan;Tour PTZ Protocol DH-SD Intelligence Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; Network Port RJ-45 (10/100 Base-T) Network Protocol PTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP;FTP;802.1x;HTTPS;SNMP;ICP/IP;DDNS;UPnP;NFS;ICM ;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPv1/v2c v3(MIB-2);Qos;RTSP;ARP Streaming Method Unicast/Multicast Unicast/Multicast	Tour	8 (up to 32 presets per tour)	Audio Compression	G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PCM	
Power-off Memory Yes Idle Motion Pattern;Preset;Scan;Tour PTZ Protocol Intelligence Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; Network Protocol RJ-45 (10/100 Base-T) FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP;F TP;802.1x;HTTPS;SNMP;TCP/IP;DDNS;UPnP;NFS;ICM ;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPv1/v2c v3(MIB-2);Qos;RTSP;ARP Streaming Method Unicast/Multicast Unicast/Multicast	Pattern	5	Network		
Idle Motion Pattern;Preset;Scan;Tour Network Protocol PTZ Protocol DH-SD Intelligence Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; IMS (Perimeter Protection) Network Protocol PTZ Protocol DH-SD Interoperability PTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPDe;NTP;F TP;802.1x;HTTPS;SNMP;TCP/IP;DNNS;UPnP;NFS;ICM ;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPv1/v2c v3(MIB-2);Qos;RTSP;ARP CGI;SDK;ONVIF (Profile S&G&T);P2P Unicast/Multicast Unicast/Multicast	Scan	5	Network Port	RJ-45 (10/100 Base-T)	
Idle Motion Pattern;Preset;Scan;Tour Network Protocol TP;802.1x;HTTPS;SNMP;TCP/IP;DDNS;UPnP;NFS;ICM;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPv1/v2cvv3(MIB-2);Qos;RTSP;ARP Intelligence Interoperability CGI;SDK;ONVIF (Profile S&G&T);P2P IVS (Perimeter Protection) Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; Streaming Method Unicast/Multicast	Power-off Memory	Yes		FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP;R TP;802.1x;HTTPS;SNMP;TCP/IP;DDNS;UPnP;NFS;ICMP ;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP;SNMPv1/v2c/	
Intelligence Interoperability CGI;SDK;ONVIF (Profile S&G&T);P2P Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; USS (Perimeter Protection)	Idle Motion	Pattern;Preset;Scan;Tour	Network Protocol		
Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; WS (Perimeter Protection) Unicast/Multicast Unicast/Multicast	PTZ Protocol	DH-SD		v3(MIB-2);Qos;RTSP;ARP	
IVS (Perimeter Protection) detection; abandoned/missing object; fast moving;	Intelligence		Interoperability	CGI;SDK;ONVIF (Profile S&G&T);P2P	
IVS (Perimeter Protection)	IVS (Perimeter Protection)		Streaming Method	Unicast/Multicast	
alarm classification; linkage tracking		parking detection; people gathering; vehicle/human	User/Host	20 (total bandwidth: 64 M)	

Storage	Micro SD card (512 GB); FTP/SFTP; NAS			
Browser	IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions iOS 10 and later versions			
Management Software	DSS;DSS Pro			
Mobile Client	iOS;Android			
Certification				
Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL62368-1			
Port				
Audio Input	1 channel (LINE IN, bare wire)			
Audio Output	1 channel (LINE OUT,bare wire)			
Alarm Linkage	Capture; preset; tour; pattern; recordings on SD card; alarm digital input; send email; audio			
Alarm Event	Motion/Tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection;			
Alarm I/O	2/1			
Audio I/O	1/1			
Power				
Power Supply	12 VDC/2 A ± 10% (included) PoE+ (802.3at)			
Power Consumption	Basic: 10 W Max.: 19 W (illuminator on + fan on + PTZ)			
Environment				
Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)			
Operating Humidity	≤ 95%			
Protection	IP66, TVS 6000 V lightning proof; surge protection; voltage transient protection			
Structure				
Product Dimensions	170.4 mm × Φ171.1 mm (6.71" × Φ6.74")			
Net Weight	2.5 kg (5.51 lb)			
Gross Weight	3.2 kg (7.05 lb)			

Ordering Information					
Туре	Model	Description			
2MP WizSense PTZ Camera	DH-SD4A216DB-HNY	2MP 16x Starlight IR WizSense Network PTZ Camera			
	SD4A216DB-HNY	2MP 16x Starlight IR WizSense Network PTZ Camera			
Accessories	DC 12 V/2A	Power Adapter			
	PFM900-E	Integrated Mount Tester			
	TF-P100	MicroSD Memory Card			
	PFA101	Mount Adapter			
	PFA303W	Wall Mount Bracket			
	PFB300C	Ceiling Mount Bracket			
	PFA150	Pole Mount Bracket			
	PFA151	Corner Mount Bracket			
	PFB303S	Parapet Mount Bracket			
	PFB5310C	In-ceiling Mount			

Accessories

Included:



DC 12 V/2A Power Adapter

Optional:



PFM900-E Integrated Mount Tester

PFB303W

Wall Mount

Bracket

PFA151

Corner Mount Bracket



TF-P100 MicroSD Memory Card



PFA101 Mount Adapter



PFB300C Ceiling Mount Bracket



OC PFA150 ount Pole Mount et Bracket



PFB303S Parapet Mount Bracket



PFB5310C In-ceiling Mount

Ceiling Mount	Ceiling Mount	Wall Mount
	PFA101+PFB300C	PFA101+PFB303W
Pole Mount (Vertical)	Corner Mount	Parapet Mount
PFA101+PFB303W+PFA150	PFA101+PFB303W+PFA151	PFA101+PFB303S
In-ceiling Mount		
PFB5310C		

Dimensions (mm[inch])







