DAHUA TECHNOLOGY

DH-SD10A848VA-HNF
4K 48x Starlight IR PTZ Network Camera

· 1/1.8" 8Megapixel STARVIS™ CMOS
· Powerful 48x optical zoom
· Starlight technology
· Max. 25/30fps@4K
· Support Hi-PoE
· IR distance up to 450m
· Smart wiper
· IP67

| H.265 | WDR | 0.002Lux | ICR D/N | IP67 | Hi-PoE |

System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight Technology, the camera is the perfect solution for dark, lowlight applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, 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 0.002lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

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.

Smart Wiper
With Dahua smart wiper technology, the wiper can be started/stopped automatically when the build-in rain senor discerns whether it rains. The technology could offer better surveillance performance against wet weather and reduce dependence on manual operation.

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.

PFA Technology
PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

Environmental
Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

Protection
The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. TVS 8KV lightning protection rating provides lightning protection, surge protection and voltage transient protection.

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

ONVIF

Technical Specification

Camera

Image Sensor	1/1.8" STARVIS™ CMOS
Effective Pixels	3840(H) x 2160(V), 8 Megapixels
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.002Lux@F1.4; 0Lux@F1.4 (IR on)
S/N Ratio	More than 55dB
IR Distance	Distance up to 450m (1476ft)
IR On/Off Control	Auto/Manual
IR LEDs	10
Smart Wiper	Support

Lens

Focal Length	5.7mm~275mm
Max. Aperture	F1.4~ F4.5
Angle of View	H: 64.55° ~ 1.5°
Optical Zoom	48x
Focus Control	Auto/Manual
Close Focus Distance	10mm~ 1500mm

DORI Distance

*Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

Detect	Observe	Recognize	Identify
4980m(16338ft)	1992m(6535ft)	996m(3267ft)	498m(1470ft)

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: -30° ~ 90°,auto flip 180°
Manual Control Speed	Pan: 0.1° ~200° /s; Tilt: 0.1° ~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)

Intelligence

Auto Tracking	Support
IVS	Tripwire, Intrusion,Abandoned/Missing, Face Detection, Heat Map

Video

Compression	H.265+/H.265/H.264+/ H.264/MJPEG
Streaming Capability	3 Streams
Resolution	4K(3840x2160)/1080P(1920×1080)/1.3M(1280x 960)/720P(1280×720)/D1(704×576/ 704×480)/ CIF(352×288/352×240)
Frame Rate	Main stream: 4K(1~25/30fps), 1080P/1.3MP/720P (1~50/60fps)
	Sub stream1: D1/CIF(1 ~ 25/30fps)
	Sub stream2: 1080P/1.3M/720P (1 ~ 25/30fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 256K ~ 8192Kbps
Day/Night	Auto(ICR) / Color / B/W
Backlight Compensation	BLC / HLC / WDR(120dB)
White Balance	Auto, ATW, Indoor, Outdoor, Manual
Gain Control	Auto / Manual
Noise Reduction	Ultra DNR (2D/3D)
Motion Detection	Support
Region of Interest	Support
Electronic Image Stabilization (EIS)	Support
Defog	Support
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Audio

Compression	G.711a/G.711Mu/AAC/G.722 / G.726/MPEG2-L2

Network

Ethernet	RJ-45 (10Base-T/100Base-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 card 128GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS
Smart Phone	IOS, Android

Certifications

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB,ANSI C63.4- 2014 UL: UL60950-1+CAN/CSA C22.2,No.60950-1

Interface

Video Interface	1 port(BNC, 1.0V[p-p], 75Ω)
RS485	1
Audio Interface	1/1
Alarm I/O	7/2

Electrical

Power Supply	AC 24V/5A(±25%), Hi-PoE
Power Consumption	24W, 38W (IR on, Heater on)

Environmental

Operating Conditions	-40°C ~ 70°C (-40°F ~ +158°F) / Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	N/A

Construction

Casing	Metal
Dimensions	Φ300(mm) x 527 (mm)
Net Weight	13kg(28.66lb)
Gross Weight	23.3kg(51.37lb)

Ordering Information

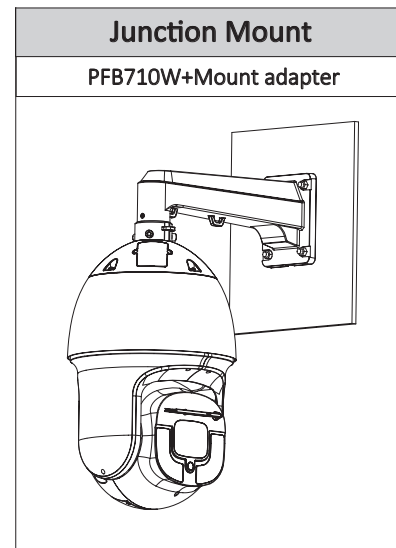| Type	Part Number	Description
4K PTZ Camera	DH-SD10A848VA-HNF	4K 48x Starlight IR PTZ Network Camera, WDR, PAL
	DH-SD10A848VAN-HNF	4K 48x Starlight IR PTZ Network Camera, WDR, NTSC
	SD10A848VA-HNF	4K 48x Starlight IR PTZ Network Camera, WDR, PAL
	SD10A848VAN-HNF	4K 48x Starlight IR PTZ Network Camera, WDR, NTSC
Accessories	PFB710W	Wall Mount
		Mount Adapter
	AC 24V/5A	Power Adapter

Accessories

Included:

AC24V/5A
Power Adapter

PFB710W
Wall Mount

Mount Adapter

Junction Mount

PFB710W+Mount adapter

Dimensions (mm)