DH-SD50225U-HNI
2MP 25x Starlight PTZ Network Camera

- 1/2.8" 2Megapixel STARVIS™ CMOS
- Powerful 25x optical zoom
- H.265 Encoding
- Starlight technology
- Max. 50/60fps@1080P
- Auto-tracking and IVS
- Support PoE+
- IP67, IK10

System Overview

Pro series adopts powerful DSP and image sensor, which can offer great image performance. It supports excellent optical zoom with autofocus and provides highly detailed zoomed-in views. With upgraded smart H.265 encoding technology, this series achieves high-efficient video stream compression, and enhance the monitoring system by saving network bandwidth and storage capacity. Suitable for both indoor and outdoor environment, this series enables 360° endless pan for wide area coverage. The pro series offers industry-leading IR capability of up to 200m.

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 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
Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +60 °C (-40 °F to +140°F) with 95% humidity. The camera complies with the IK10 Vandal Resistance impact rating making it capable of withstanding the equivalent of 55 kg (120 lbs) of force. Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection
The camera allows for ±10% input voltage tolerance, suitable for the unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning.

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

Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2 Megapixels
RAM/ROM	1024M/128M
Scanning System	Progressive
Electronic Shutter Speed	1/1s~1/30,000s
Minimum Illumination	Color: 0.005Lux@F1.6; B/W: 0.0005Lux@F1.6
S/N Ratio	More than 55dB
IR Distance	N/A
IR On/Off Control	N/A
IR LEDs	N/A

Lens

Focal Length	4.8mm~120mm
Max. Aperture	F1.6 ~ F4.4
Angle of View	H: 59.2° ~ 2.4°
Optical Zoom	25x
Focus Control	Auto/Manual
Close Focus Distance	100mm~ 1000mm

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
1613m(5292ft)	646m(2119ft)	323m(1060ft)	161m(528ft)

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: 0° ~ 90°,auto flip 180°
Manual Control Speed	Pan: 0.1° ~350° /s; Tilt: 0.1° ~250° /s
Preset Speed	Pan: 500° /s; Tilt: 500° /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

Intelligence

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

Video

Compression	H.265+/H.265/H.264+/H.264
Streaming Capability	3 Streams
Resolution	1080P(1920×1080)/1.3M(1280×960)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)
Frame Rate	Main stream: 1080P/1.3M/720P(1~50/60fps)
	Sub stream1: D1/CIF(1 ~ 25/30fps)
	Sub stream2: 1080P/1.3M/720P/D1/CIF (1~25/30fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 448K ~ 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 Detetion	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/G.729/ 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

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Interface

Video Interface	N/A
Audio Interface	1/1
RS485	N/A
Alarm I/O	2/1

Electrical

Power Supply	AC24V/1.5A(±10%), PoE+(802.3at)
Power Consumption	13W,23W (Heater on)

Environmental

Operating Conditions	-40°C ~ 60°C (-40°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	Φ186(mm) x 253(mm)
Net Weight	2.5kg(5.51lb)
Gross Weight	4.5kg(9.92lb)

Ordering Information

Type	Part Number	Description
2MP PTZ Camera	DH-SD50225U-HNI	2MP 25x Starlight PTZ Network Camera, WDR, PAL
	DH-SD50225UN-HNI	2MP 25x Starlight PTZ Network Camera, WDR, NTSC
	SD50225U-HNI	2MP 25x Starlight PTZ Network Camera, WDR, PAL
	SD50225UN-HNI	2MP 25x Starlight PTZ Network Camera, WDR, NTSC
Accessories	PFB300S	Wall Mount
	PFA110	Mount Adapter
	AC24V/1.5A	Power Supply
	PFA140	Power box
	PFB300C	Ceiling Mount
	PFA120	Junction Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	PFB303S	Parapet mount

Accessories

Included:

PFB300S
Wall Mount

PFA110
Mount Adapter

AC24V/1.5A
Power Supply

Optional：

PFA140
Power box
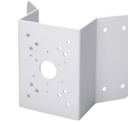
PFB300C
Ceiling Mount

PFA120
Junction Box

PFA150
Pole Mount

PFA151
Corner Mount

PFB303S
Parapet Mount

Ceiling Mount	Junction Mount
PFA110 + PFB300C	PFA110 + PFB300S + PFA120
Power Box Mount	Pole Mount
PFA110 + PFB300S + PFA140	PFA110 + PFB300S + PFA150
Corner Mount	Parapet Mount
PFA110 + PFB300S + PFA151	PFA110 + PFB303S

Dimensions (mm)

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