DH-SD22204UE-GN
2MP 4x Starlight PTZ Network Camera

· 1/2.8" STARVIS™ CMOS
· Powerful 4x optical zoom
· Support triple-streams encoding
· WDR, Day/Night(ICR), Ultra DNR
· Max. 25/30fps@1080P
· Max 100°/s pan speed
· IVS
· Support PoE
· IP66, IK10

WDR	ICR D/N	IP66	Vandal-proof	PoE	0.005Lux

System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, the camera provides a wide monitoring range and great detail. The camera delivers 2MP resolution at 25/30fps. The camera is equipped with smooth control, high quality image, and good protection, meeting compact size demands of video surveillance applications.

Functions

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.

High Efficiency Video Coding (H.265)

The H.265 (ITU-T VCEG) video compression standard offers double the data compression ratio at the same level of video quality, or substantially improved video quality at the same bit rate, as compared to older video compression technologies. H.265 offers such impressive compression by expanding the pattern comparison and difference-coding, improving motion vector prediction and motion region merging, and incorporating an additional filtering step called sample-adaptive offset filtering

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.

Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -30 °C to +60 °C (-22 °F to +140 °F) with 95% humidity. The camera complies with the IK10 Vandal Resistance impact rating. Subjected to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) 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	256M/128M
Electronic Shutter Speed	1/1s~1/30,000s
Scanning System	Progressive
Minimum Illumination	Color: 0.005Lux@F1.6; B/W: 0.0005Lux@F1.6
IR Distance	N/A
IR On/Off Control	N/A
IR LEDs	N/A

Lens

Focal Length	2.7mm~11mm
Max. Aperture	F1.6
Angle of View	H: 112.5° ~ 30°
Optical Zoom	4x
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
124.1m(407ft)	49.7m(163ft)	24.8m(81ft)	12.4m(40ft)

PTZ

Pan/Tilt Range	Pan: 0° ~ 355°; Tilt: 0° ~ 90°
Manual Control Speed	Pan: 0.1° ~100° /s; Tilt: 0.1° ~60° /s
Preset Speed	Pan: 100° /s; Tilt: 60° /s
Presets	300
PTZ Mode	8 Tour(up to 32 preset per tour)
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/Tour if there is no command in the specified period
Protocol	DH-SD

Intelligence

Event Trigger	Motion detection, Video tampering, Network disconnection, IP address conflict, Illegal access, Storage anomaly
Auto Tracking	N/A

IVS	Tripwire, Intrusion,Abandoned/Missing
Advanced Intelligent Functions	Face Detection

Video

Compression	H.265/H.264/MJPEG(Sub Stream)
Streaming Capability	3 Streams
Resolution	1080P(1920×1080)/720P(1280×720)/ D1(704×576/704×480)/CIF(352×288/352×240)
Frame Rate	Main stream: 1080P/720P/D1 (1 ~ 25/30fps)
	Sub stream1: D1/CIF(1 ~ 25/30fps)
	Sub stream2: 720P/D1/CIF (1 ~ 25/30fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.265/H.264: 448K ~ 8192Kbps, MJPEG: 5120K ~ 10240Kbps
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)	N/A
Defog	Support
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Network

Ethernet	RJ-45 (10XBase-T/100Base-TX)
Wi-Fi	N/A
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 Profile S&G, API
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, DMSS
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	N/A
RS485	N/A
Audio I/O	N/A
Alarm I/O	N/A

Electrical

Power Supply	DC 12V/1.5A, PoE(802.3af)
Power Consumption	5.5W

Environmental

Operating Conditions	-30°C ~ 60°C (-22°F ~ +140°F) / Less than 95% RH
Ingress Protection	IP66
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	Φ122 (mm) x 89 (mm)
Net Weight	0.52kg(1.23lb)
Gross Weight	0.73kg(1.61lb)

Ordering Information

Type	Part Number	Description
2MP PTZ Camera	DH-SD2220UE-GN	2MP 4x Starlight PTZ Network Camera, WDR, PAL
	DH-SD22204UEN-GN	2MP 4x Starlight PTZ Network Camera, WDR, NTSC
	SD22204UE-GN	2MP 4x Starlight PTZ Network Camera, WDR, PAL
	SD22204UEN-GN	2MP 4x Starlight PTZ Network Camera, WDR, NTSC
Accessories	PFA137	Mount Adapter
	DC12V/2A	Power Adapter
	PFB203W	Wall Mount
	PFB200C	In-ceiling Mount
	PFA152-E	Pole Mount

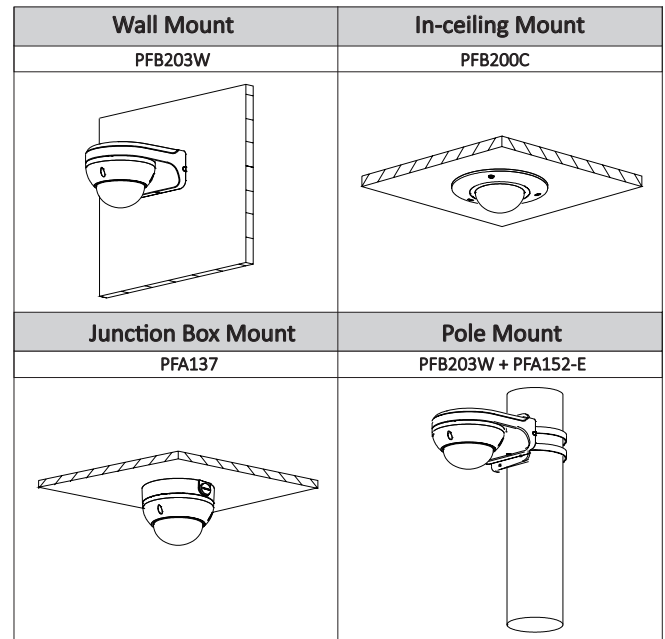## Accessories

Optional:

PFA137
Mount Adapter

DC12V/2A
Power Adapter

PFB203W
Wall Mount

PFA152-E
Pole Mount

PFB200C
Ceiling Mount

Wall Mount	In-ceiling Mount
PFB203W	PFB200C
Junction Box Mount	**Pole Mount**
PFA137	PFB203W + PFA152-E

Dimensions (mm)

Ø122mm

Ø89mm

Ø84.8mm