

# DH-SD22204DB-GC

2MP 4x Starlight HDCVI PTZ Camera



- 1/2.8" 2Megapixel CMOS.
- Powerful 4x optical zoom.
- Starlight technology.
- 2D NR; 3D NR.
- Max. 25/30 fps@1080p, 25/30/50/60 fps@720p.
- IP66, IK10.



## System Overview

With its powerful optical zoom, and accurate pan and tilt capabilities, the HDCVI PTZ camera series provides an all-in-one solution for large-scale monitoring. It harnesses the latest starlight technology, allowing it to produce highly detailed images even in low light conditions. These cameras offer smooth control and high-grade protection that enable them to meet the requirements of video surveillance in small and medium-sized scenes.

## 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.

### 3DNR

Dahua's 3DNR technology reduces image noise with little to no impact on image sharpness, especially in poor lighting conditions. It detects the noise, and compares the sequential frames to effectively reduce the noise. It also makes efficient use of bandwidth, saving on storage space.

### Long Distance Transmission

HDCVI technology provides long distance transmission in real time without transmission loss. It supports transmission distances up to 300m for 2MP HD videos through coaxial cables, and up to 200m through UTP cables.

\*The results were obtained and verified through rigorous testing in Dahua's test laboratory.

## 3 Signals over 1 Coaxial Cable

HDCVI technology supports 3 signals (video, audio\* and data) which are simultaneously transmitted over a coaxial cable. Dual-way data transmission allows the HDCVI camera to interact with the XVR to perform various actions such as sending control signals and triggering alarms.

\* Audio input is available for select HDCVI camera models.

## 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.

## Protection (IP66, TVS 6000 V)

IP66, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

## Technical Specification

### Camera

Image Sensor	1/2.8" CMOS
Pixel	2 MP
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	256 MB
Electronic Shutter Speed	1/3 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	0.005lux@F1.6 (Color, 30 IRE); 0.0005lux@F1.6 (B/W, 30 IRE)

### Lens

Focal Length	2.7 mm–11 mm			
Max. Aperture	F1.6–F3.0			
Field of View	H: 99.1°–31.9° V: 53.4°–18.0° D: 117.7°–36.6°			
Optical Zoom	4x			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	1 m (3.28 ft)			
DORI Distance	Detect	Observe	Recognize	Identify
	151.7 m (497.70 ft)	59.9 m (196.52 ft)	30.3 m (99.41 ft)	15.2 m (49.87 ft)

### PTZ

Pan/Tilt Range	Pan: 0° to 355°; Tilt: 0° to +90° (When the vertical field of view is between 0° and 10°, the device case will block part of the image)
Manual Control Speed	Pan: 0.1°–100°/s Tilt: 0.1°–60°/s
Preset Speed	Pan: 100°/s; Tilt: 60°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Power-off Memory	Yes
Idle Motion	Preset; Tour
PTZ Protocol	DH-SD Pelco-P/D (Auto recognition)

### Video

Resolution	1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480)
Video Frame Rate	1080p (25/30 fps); 720p (25/30/50/60 fps)
Day/Night	Yes
BLC	Yes
WDR	DWDR
HLC	Yes

White Balance	Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D NR; 3D NR
Defog	Electronic
Digital Zoom	16x
Image Rotation	180°
S/N Ratio	≥50 dB

### Function

CVI Product Output Mode	TVI;CVI;CVBS;AHD (CVBS is only used for debugging)
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### Certification

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

Analog Output	1 channel (CVBS/CVI output, BNC)
RS-485	1 (baud rate range: 1200 bps–9600 bps)

### Power

Power Supply	12VDC, 1.5 A ± 10%
Power Consumption	Basic: 7 W Max.: 9 W (PTZ)

### Environment

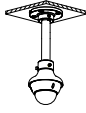
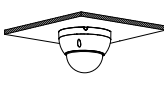
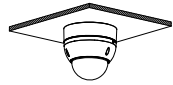

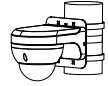
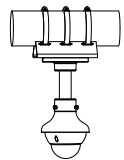
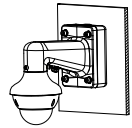
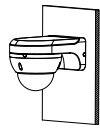
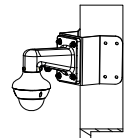
Operating Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
Operating Humidity	≤95% (RH)
Protection	IP66; IK10; TVS 6000V lightning proof; surge protection; voltage transient protection

### Structure

Product Dimensions	88.9 mm × Φ122.0 mm (3.50" × Φ4.80")
Net Weight	0.6 kg (1.32 lb)
Gross Weight	0.65 kg (1.43 lb)

## Ordering Information

Type	Model	Description
2MP HDCVI Camera	DH-SD22204DB-GC	2MP 4x Starlight PTZ HDCVI Camera, PAL
	DH-SD22204DBN-GC	2MP 4x Starlight PTZ HDCVI Camera, NTSC
	SD22204DB-GC	2MP 4x Starlight PTZ HDCVI Camera, PAL
	SD22204DBN-GC	2MP 4x Starlight PTZ HDCVI Camera, NTSC
Accessories (Optional)	DC12V/1.5A	Power Adapter
	PFA106	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	PFA137	Junction Box
	PFB305W	Wall Mount Bracket
	PFA150	Pole Mount Bracket
	PFB203W	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFA120	Junction Box
	PFA151	Corner Mount Bracket

Ceiling Mount	Ceiling Mount	Ceiling Mount
PFA106+PFB220C	\	PFA137
		
Pole Mount(Vertical)	Pole Mount(Vertical)	Pole Mount(Horizontal)
PFA106+PFB305W+PFA150	PFB203W+PFA152-E	PFA106+PFB220C+PFA150
		
Wall Mount	Wall Mount	Corner Mount
PFA106+PFB305W+PFA120	PFB203W	PFA106+PFB305W+PFA151
		

## Accessories

Optional:



DC12V/1.5A  
Power Adapter



PFA106  
Mount Adapter



PFB220C  
Ceiling Mount  
Bracket



PFA137  
Junction Box



PFB305W  
Wall Mount  
Bracket



PFA150  
Pole Mount  
Bracket



PFB203W  
Wall Mount Bracket



PFA152-E  
Pole Mount Bracket



PFA120  
Junction Box



PFA151  
Corner Mount  
Bracket

## Dimensions (mm [inch])

