DH-SD42216DB-HC

2MP 16x Starlight HDCVI PTZ Camera

· 1/2.8" 2Megapixel STARVIS™ CMOS.

· Powerful 16x optical zoom.

· Starlight technology.

· 120 dB true WDR, 3D NR.

· Max. 25/30 fps@1080p, 25/30/50/60 fps@720p.

· IK10.

· IP66.

2Mp | IP66 | Starlight | WDR | 0.005Lux | 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.

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.

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.

Protection (IP66, TVS 6000 V)

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

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.

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	0.005 lux@F1.6 (Color, 30 IRE); 0.0005 lux@F1.6 (B/W, 30 IRE)

Lens

Focal Length	5 mm–80 mm
Max. Aperture	F1.6–F2.8
Field of View	H: 59.6°–5.4°; V: 34.6°–3.0°; D: 67.3°–6.2°
Optical Zoom	16x
Focus Control	Auto; semi-auto; manual
Close Focus Distance	1 m–1.5 m (3.28 ft–4.92 ft)
Iris Control	Auto; manual

DORI Distance	Detect	Observe	Recognize	Identify
	1103.4 m (3620.24 ft)	435.9 m (1429.99 ft)	220.7 m (724.05 ft)	110.3 m (362.02 ft)

*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless; Tilt: 0° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°–300°/s; Tilt: 0.1°–200°/s
Preset Speed	Pan: 0.1°–300°/s; Tilt: 0.1°–200°/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 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	120 dB
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual
Noise Reduction	2D NR; 3D NR
Defog	Electronic
Digital Zoom	16x
Image Rotation	180°
Privacy Masking	Yes
S/N Ratio	≥ 50 dB

Function

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

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

Port

Analog Output	1 channel (CVBS/CVI output, BNC)
RS-485	1 (baud rate range: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire)
Alarm Input	2 (on-off value input: 0–5 VDC)
Alarm Output	1
Alarm Linkage	Scan; tour; pattern; preset; alarm digital output
Alarm Event	Alarm input

Power

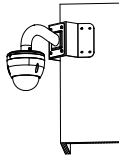|	
Power Supply	12 VDC, 3 A ± 10%
Power Consumption	Basic: 8 W Max: 12 W (PTZ)

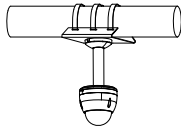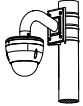### Environment
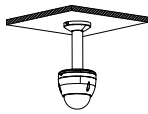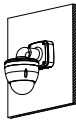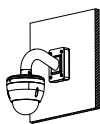
Operating Temperature	−30 °C to +60 °C (−22 °F to +140 °F)
Operating Humidity	≤ 95%
Protection	IK10; TVS 6000 V lightning proof; IP66; surge protection; voltage transient protection

Structure

Product Dimensions	154.9 mm × Φ170.4 mm (6.10" × Φ6.71")
Net Weight	1.8 kg (3.97 lb)
Gross Weight	3.3 kg (7.28 lb)

Ordering Information

Type	Model	Description
2MP HDCVI Camera	DH-SD42216DB-HC	2MP 16x Starlight PTZ HDCVI Camera, PAL
	DH-SD42216DBN-HC	2MP 16x Starlight PTZ HDCVI Camera, NTSC
	SD42216DB-HC	2MP 16x Starlight PTZ HDCVI Camera, PAL
	SD42216DBN-HC	2MP 16x Starlight PTZ HDCVI Camera, NTSC
Accessories	DC12V/3A	Power Adapter
	PFA102	Mount Adapter
	PFB300C	Ceiling Mount Bracket
	PFB302S	Wall Mount Bracket
	PFB300S	Wall Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket

Accessories

Included:

DC12V/3A
Power Adapter

Optional:

PFA102
Power Adapter

PFB300C
Ceiling Mount Bracket

PFB302S
Wall Mount Bracket

PFB300S
Wall Mount Bracket

PFA120
Junction Box

PFA150
Pole Mount Bracket

PFA151
Corner Mount Bracket

Ceiling Mount	Wall Mount	Wall Mount
PFA102+PFB300C	PFA102+PFB302S	PFA102+PFB300S+PFA120

Corner Mount	Pole Mount (Horizontal)	Pole Mount (Vertical)
PFA102+PFB300S+PFA151	PFA102+PFB300C+PFA150	PFA102+PFB300S+PFA150

Ceiling Mount
/

Dimensions (mm[inch])

Φ170.4 [Φ6.71]
154.9 [6.10]
95.9 [3.78]
Φ119.6 [Φ4.71]