

AVS-4KD8021-IR

8MP HD-AVS Indoor / Outdoor Mid-Size Eyeball Dome Camera



- Starlight, 120dB True WDR, 3DNR
- Max. 4K resolution
- HD/SD switchable
- Audio In interface & built-in mic
- 3.6mm fixed lens
- Max IR LED length 164' / 50m, Smart IR
- IP67, DC12V \pm 30%

System Overview

Experience 4K video surveillance with the simplicity of reusing existing coaxial infrastructure. The 4K HD-AVS camera features a powerful Cannon Image Signal Processor (ISP) coupled with an advanced 1/1.8" image sensor, which provides superior high-quality images. It also uses Starlight Technology, paired with 120dB true WDR for a clear image in poor lighting conditions. In addition, the camera features broadcast-quality audio to provide enhanced supplementary evidence collection. Ultra-high definition and a complete set of features makes the 4K HD-AVS camera an ideal choice for mid- to large-size businesses and projects where both highly reliable surveillance and construction flexibility are needed.

Functions

4 Signals over 1 coaxial Cable

HD-AVS technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HD-AVS camera to interact with the AVR, such as sending control signal or triggering alarm. Moreover, HD-AVS technology supports PoC for construction flexibility.

* Audio input is available for some models of HD-AVS cameras

Long Distance Transmission

HD-AVS technology guarantees real-time transmission at long distances without any loss. It supports up to 2,296' / 700m transmission for 4K and 4MP HD video via coaxial cable, and up to 984' / 300m via UTP cable.

Starlight

For challenging low-light applications, Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.006lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Broadcast-quality Audio

Audio information can be used as supplementary evidence in video surveillance applications. The HD-AVS camera supports audio signal transmission over coaxial cable. In addition, it uses unique audio processing and transmission technologies that best record source audio and eliminate noise, guaranteeing the quality and effectiveness of collected audio information.

Multiple-formats

This camera is capable of outputting in multiple video formats, including HD-AVS (IC Realtime only), CVBS (standard analog 960H / D1), AHD, and TVI. AHD and TVI are common HD technologies used by other manufacturers. A DIP switch located on the cable allows you to quickly toggle formats, further simplifying installation and troubleshooting. This feature makes the camera compatible IC Realtime AVRs, and many other manufacturer's HD/SD recorders.

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.

Advanced 3DNR

3DNR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. IC Realtime's advanced 3DNR technology allows remarkable noise reduction with little impact to sharpness, especially under limited lighting conditions. 3DNR also effectively decreases the required bandwidth and helps lower storage space requirements.

Protection

AVS-4KD8021-IR has outstanding reliability, unsurpassed due to its rugged design. The camera is protected against water and dust by IP67 rating, making it suitable for indoor or outdoor environments. It also features \pm 30% input voltage tolerance, allowing it to operate under unstable power supply conditions. Its 4KV lightning rating provides protection from the effects of a lightning strike.

Technical Specifications

Camera

Image Sensor	1/1.8" CMOS
Effective Pixels	3840(H) x 2160(V)
Scanning System	Progressive
Electronic Shutter Speed	1/3s ~ 1/100,000s
Minimum Illumination	0.005Lux @ F1.6, 30IRE, 0Lux IR On
S/N Ratio	> 65dB
IR Distance	164' / 50m
IR On/Off Control	Auto / Manual
IR LEDs	2

Lens

Type	Fixed / Fixed Iris			
Mount Type	Board-in			
Focal Length	3.6mm			
Max. Aperture	F1.6			
Angle of View	H: 87°			
Focus Control	Auto / Manual			
Close Focus Distance	8.2' / 2.5m			
DORI Distance	Detect	Observe	Recognize	Identify
	341' / 104m	137' / 42m	69' / 21m	33' / 10m

Pan/Tilt/Rotation

Pan / Tilt / Rotation Range	Pan: 0° ~ 360° Tilt: 0° ~ 70° Rotation: 0° ~ 360°
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Video

Resolution	8 MP (3840 x 2160)
Frame Rate	15fps @ 8MP 20fps @ 6MP 30fps @ 4MP
Output	1-channel BNC HD-AVS / AHD / TVI / CVBS switchable output (DIP switch)
Day/Night	Auto (ICR) / Manual
OSD Menu	Multi-language
BLC Modes	BLC / HLC / WDR
WDR	120dB
Gain Control	AGC
Noise Reduction	2D / 3D
White Balance	Auto / Manual
Smart IR	Auto / Manual

Certifications

Certifications	CE: (EN55032, EN55024, EN50130-4) FCC: (CFR 47 FCC Part 15 subpart B, ANSI C63.4-2014) UL: (UL60950-1 +CAN / CSA C22.2 No.60950-1)
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Interface

Audio	1 Ch Audio In (for external mic) & Built-in Mic
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Electrical

Power Supply	12V DC ± 30%
Power Consumption	Max 8W (12V DC, IR LEDs on)

Environmental

Operating Conditions	-22°F ~ 140°F / -30°C ~ 60°C; < 90% RH
Storage Conditions	-22°F ~ 140°F / -30°C ~ 60°C; < 90% RH
Ingress Protection	IP67

Construction

Casing	Aluminum
Dimensions	Φ4.17" × 3.9" / Φ106mm × 99.2mm
Net Weight	1.10lbs / 0.5kg
Gross Weight	1.37lbs / 0.62kg

Mounting

Dimensions (mm / in)

No.	Item	No.	Item	No.	Item	No.	Item
①	Mounting surface	②	Expansion bolt	③	Pedestal	④	Self-tapping screw
⑤	Device	⑥	Enclosure	⑦	Fixing ring		

Table 3-1

