dahua TECHNOLOGY

4K HDCVI Box Camera
8 MP Micro Four Thirds Starlight HDCVI Box Camera

HDCVI

MICRO FOURTHIRDS

- Micro Four Thirds 8 MP Progressive-scan CMOS Sensor
- M43 Lens Interface
- 3840 x 2160 at 30 fps (HDMI) and 3840 x 2160 at 15 fps (BNC)
- Simultaneous HDMI and HDCVI/CVBS Video Output
- Starlight+ Technology for Ultra-low Light Sensitivity
- Ultra Wide Dynamic Range (140 dB) and 2D and 3D Noise Reduction
- Built-in Microphone
- Software Upgrade via USB
- Five-year Warranty*

4K | WDR 140dB | Starlight+ | AC 24V DC 12V

System Overview

Experience the superior clarity of Dahua's Ultra 4K HDCVI cameras for vast coverage and superior image details. As the world's first 4K over coax cameras, the Dahua Ultra 4K HDCVI series leverages existing coax infrastructures to deliver forensic-level images seamlessly and more cost effectively. The outstanding performance, easy installation and rugged design make the camera an ideal choice for mid- to large-size businesses and for applications in large, open spaces (city centers, parks, campuses) where highly reliable surveillance and construction flexibility are valued.

Functions

Micro Four Thirds System
This Dahua camera takes advantage of the The Micro Four Thirds System, an interchangeable-lens photography system that offers superior picture quality from a smaller lens. This system offers nine times the surface area and pixel size of the standard 1/3-in. sensor commonly used in video surveillance applications. The larger surface area and pixel size increases the light gathering capability of the sensor to deliver color images in ultra-low light conditions in the 8MP camera class when other cameras have switched to monochrome.

4K Resolution
4K resolution is a revolutionary breakthrough in image processing technology. 4K delivers four times the resolution of standard HDTV 1080p devices and offers superior picture quality and image details. 4K resolution improves the clarity of a magnified scene to view or record crisp forensic video from large areas.

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 0.001 lux. The camera uses a large pixel sensor, smart imaging algorithms and a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

M43 Lens Interface
The lens is a key component of any security camera and one that directly effects the quality of the image. The Dahua 4K HDCVI box camera features the M43 lens interface, typically found on most SLR cameras. This camera is compatible with all types of M43 lenses, including fixed and vari-focal lenses.

Four Signals over One Coaxial Cable
HDCVI technology simultaneously transmits video, power, data, and audio over a single coaxial cable. Dual-way data transmission allows the HDCVI camera to communicate with an HCVR to send control signals or to trigger alarms. HDCVI along with PoC technology delivers power[1] to devices at the edge, simplifying installation.

Long Distance Transmission
HDCVI technology guarantees real-time transmission over long distances without loss of video quality. HDCVI cameras provide the same resolution as most IP network camera systems using existing RG-59, RG-6, or CAT 6 UTP cabling.

Simplicity
HDCVI technology seamlessly integrates traditional analog surveillance systems with upgraded, high-quality HD video, making it the best choice to protect security investments. The plug and play approach enables full HD video surveillance without the hassles of configuring a network.

Multiple Outputs
The camera supports HDCVI and CVBS signal outputs simultaneously with one HDMI connector and one BNC connector. These output signals allow the camera to integrate with various devices, including analog matrix systems and monitors.

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1. Requires PoC Transceivers for each channel and an external power supply for each transceiver.

Technical Specification

Camera

Image Sensor	Micro Four Thirds 4/3-in. 8 MP Progressive-scan CMOS
Effective Pixels	3840(H) x 2160(V), 8 MP
Scanning System	Progressive
Electronic Shutter Speed	1/1 s to 1/100,000 s
Minimum Illumination	Color: 0.001 lux at F1.2 (1/3 s, 30 IRE) Color: 0.0005 lux at F0.95 (1/3 s, 30 IRE) Color: 0.003 lux at F0.95 (1/30 s, 30 IRE)
S/N Ratio	More than 65 dB

Lens

Lens Type	External
Mount Type	M43

Video

Resolution		8 MP, 3840 x 2160
Frame Rate	HDMI	3840 x 2160 at 30 fps
	BNC	3840 x 2160 at 15 fps[2] or 4MP at 30 fps
Video Output		One (1) HDMI 4K Ultra High-definition Channel and, One (1) BNC Channel
Video Transmission[3]	RG-59/U Coax	720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4K/4 MP 500 m (1640.42 ft)
	RG-6/U Coax	720p: 1200 m (3937.01 ft) 1080p: 800 m (2624.67 ft) 4K/4 MP: 700 m (2296.59 ft)
	CAT 6 UTP (balun required)	720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 4K/4 MP: 300 m (984.25 ft)
Day/Night		Color
On-Screen Display		Multi-language
BLC Mode		BLC, HLC, Ultra WDR
WDR		140 dB
Gain Control		AGC
Noise Reduction		2D/3D
White Balance		Auto, Manual
Advanced Features		Motion Detection, Privacy Mask

Interface

Video Output	One (1) HDMI (4K video) and One (1) BNC, HDCVI or CVBS Output, switchable
Audio Input	One (1) Channel plus Built-in Microphone
RS485	One (1) Port
Alarm	Input: Two (2) Channels Output: One (1) Channel
USB	One (1) Micro USB Port for Firmware Update

Electrical

Power Supply, Input	24 VAC ±25% or 12 VDC ±25%
Power Consumption	Maximum 9 W (12 VDC)

Certifications

Safety	EN55032, EN55024, EN50130-4 UL60950-1+CAN/CSA C22.2 No.60950-1
Electromagnetic Compatibility (EMC)	FCC CFR 47 Part 15 subpart B ANSI C63.4-2014

Environmental

Operating Conditions	−30° C to +60° C (−22° F to +140° F), Less than 90% RH Initiate start up above −30° C (−22° F)
Storage Conditions	−30° C to +60° C (−22° F to +140° F), Less than 90% RH

Construction

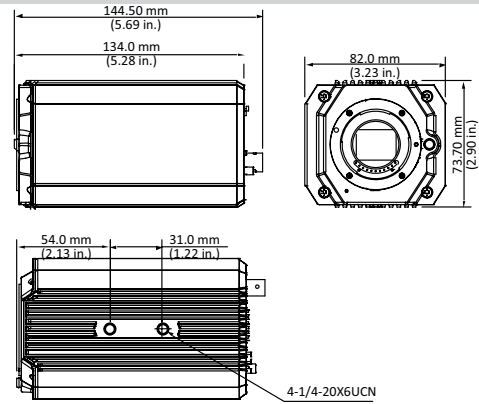|	
Casing	Aluminium
Dimensions	144.50 mm x 82.0 mm x 73.70 mm (5.69 in. x 3.23 in. x 2.90 in.)
Net Weight	0.62 kg (1.36 lb)
Gross Weight	0.83 kg (1.83 lb)

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2. 4K at 15 fps resolution achievable with the following Dahua HDCVI DVRs: C52A1N/C52A2N/C52A3N (Channel 1) and X58A3S (Channels 1 and 9).
3. Transmission distance results verified by real-scene testing in Dahua's test laboratory. Actual transmission distances may vary due to external influences, cable quality, and wiring structures.

Ordering Information

Type	Part Number	Description
8 MP Camera	A83AA9	8 MP Ultra WDR HDCVI Box Camera
Accessories, optional	PFB110W	Wall/Ceiling Mount Bracket
	PFB121W	Wall Mount Bracket
	DH-PFM320D-015	12 VDC, 2 A Power Adapter
	DH-PFM321D-US	12 VDC, 1 A Power Adapter
	PFM800-E	Passive HDCVI Balun
	PFM810	POC Transceiver
	DH-PFL085-J12M	12 MP, 8.5 mm Fixed Lens, M43
	DH-PFL2070-J12M	12 MP, 20 mm to 70 mm Vari-focal Lens, M443

Dimensions (mm/in.)

Accessories

Optional:

PFB110W
Wall/Ceiling Mount Bracket

PFB121W
Wall Mount Bracket

DH-PFM320D-015
Power Adapter

DH-PFM321D-US
Power Adapter

PFM800-E
Passive HDCVI Balun

PFM810
POC Transceiver

DH-PFL085-J12M
12 MP Fixed Lens

DH-PFL2070-J12M
12 MP Vari-focal Lens

Wall Mount	Ceiling Mount
PFB121W	PFB110W