dahua
TECHNOLOGY

5MP TiOC HDCVI Eyeball Camera
Active Alarm and Dual Illuminators when Paired with an XVR

HDCVI

ArcticPro

- 1/2.7-in. 5MP Progressive-scan CMOS Sensor
- Max 25 fps@5MP (16:9 video output), 2.8 mm Fixed Lens
- 120 dB true WDR, 3D NR, 40 m illumination distance
- Dual Smart Illumination — IR and White Light
- Active Alarm with Red/Blue Lights and Siren or Voice Prompt
- ArcticPro Series Camera — Operational down to –40° C (–40° F)
- CVI/CVBS/AHD/TVI Switchable
- Super Adapt, Built-in Microphone
- IP67 Ingress Protection
- Five-year Warranty*

5Mp | Smart Dual Illuminators | Sound and Light Alarm | WDR | Audio | IP67

*In order to use the 5MP TiOC HDCVI camera, the firmware of XVR must be upgraded to V4.001.0000001.0.R.220402 or later version.

System Overview

The Dahua Three-in-One Camera (TiOC) offers multiple features working in tandem to assist with deterrence and low-light detection while delivering high-resolution video images. The camera also offers a multi-dimensional system that links security videos to alarms, audio prompts and various types of information to assist with verifying potential risks. The camera is ideal for a host of diverse applications — True Wide Dynamic Range, and Smart Dual illuminators allow the camera to operate in any lighting condition and the IP67 rating makes the camera suitable for the harshest environments.

Functions

Smart Dual Illuminators
The camera offers both IR and white-light illuminators and intelligently employs each depending on the situation. Typically, the camera enters the IR mode as ambient light decreases. When the camera detects a person entering the monitoring area, it activates the white-light illuminator to capture full-color details. Once the person leaves the area, the camera switches back to IR illumination.

Active Alarm
The camera features active deterrence functionality to respond automatically to a triggered alarm. The configurable automatic responses include activation of red and blue lights and the broadcast of a built-in message or siren to stop an incident before it happens.

True 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.

Super Adapt
Super Adapt technology monitors external lighting conditions and automatically adjusts the camera settings to provide optimal video images, whether indoors or outdoors. Plus, with this technology installers no longer have to take time to set the optical parameters

manually, the camera automatically adjusts to the optimal settings, saving time and money.

Advanced 3D NR
3D NR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. Dahua's advanced 3D NR technology allows remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. Besides, the advanced 3D NR effectively decreases the band width and saves the storage space.

Broadcast-quality Audio
Audio information is used as supplementary evidence in video security applications. This HDCVI camera transmits audio signals over the coaxial cable, eliminating the need for separate audio wiring. In addition, the camera uses unique audio processing and transmission technology that eliminates noise to best duplicate source audio, guaranteeing high-quality and highly effective audio information.

Image Light-interference
With the camera's red and blue flashing lights, anyone at the scene can visually see the lights. However, the flashing lights are unnoticable by the operator or during a post forensic review as it helps avoid interference or distraction for a better on-screen image.
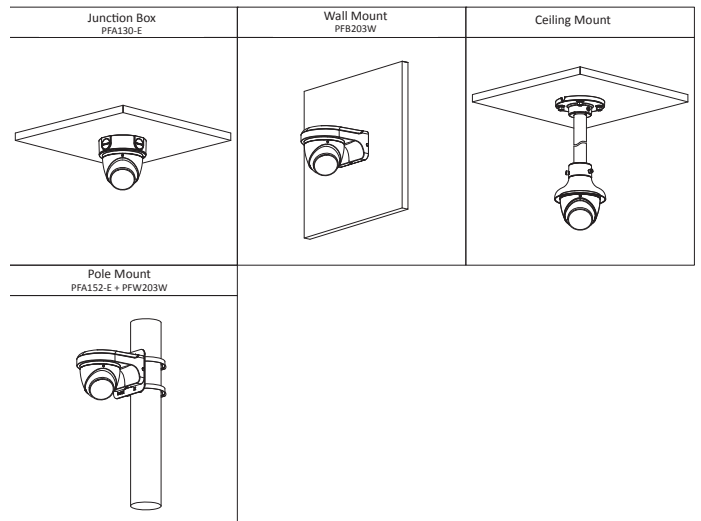
Protection
The camera is subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating making it suitable for demanding outdoor applications. The camera allows for ±30% input voltage tolerance, suitable for the most unstable conditions for outdoor applications.

Technical Specification

Camera

Image Sensor	1/2.7-in. 5MP CMOS Sensor
Effective Pixel	2880 (H) × 1620 (V)
Scanning System	Progressive
Electronic Shutter Speed	1/3 s–1/100,000 s
S/N Ratio	Greater than 65 dB
Minimum Illumination	Color: 0.001 lux at F1.0 (30 IRE) B/W: 0.0001 lux at F1.0 (30 IRE) 0 lux at F1.0 (with illuminators on)
Illumination Distance	IR: 40.0 m (131.23 ft) White Light: 40.0 m (131.23 ft)
Illuminator On/Off Control	Auto, Manual
Illuminators	IR: Two (2) LEDs White Light: Two (2) LEDs
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm
Max. Aperture	F1.0
Angle of View	Horizontal: 111° Vertical: 57° Diagonal: 131°
Iris Type	Fixed
Close Focus Distance	2.8 mm: 1.5 m (4.92 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	66.0 m (216.54 ft)	26.4 m (86.61 ft)	13.2 m (43.31 ft)	6.6 m (21.65 ft)

Installation Angle

Range	Pan: 0° to 360° Tilt: 0° to 78° Rotation: 0° to 360°

Video

Resolution	5MP (2880 × 1620); 4MP (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480)
Frame Rate	CVI: 5MP@25 fps; 4MP@30 fps; 1080p@30 fps AHD: 4MP@30 fps TVI: 4MP@30 fps CVBS: 960H

Day/Night

Day/Night	Auto (ICR), Color, B/W
BLC	BLC, HLC, WDR, HLC-Pro
WDR	120 dB
White Balance	Auto; Area WB
Gain Control	Auto; Manual
Noise Reduction	3D DNR
Illumination Mode	Smart IR and WL; WL Mode; IR Mode
Mirror	Off, On
Privacy Masking	Off, On (8 Areas, Rectangle)

Active Alarm

Sound Warning	Audio 1: Alarm Audio2: No parking here Audio3: Private land no entry Audio4: Warning zone keep off Audio5: Welcome Volume: High/medium/low; duration: 5s–60s; 110 dB
Red/Blue Light Warning	Flash: 5s–60s; frequency: high/medium/low

Certifications

CE	EN55032, EN61000-3, EN55024, EN50130-4, EN55035, EN62368-1
Safety	UL62368-1+CAN CSA C22.2 No.62368-1-14
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 SubpartB, ANSI C63.4-2014

Interface

Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port
Audio Input	One (1) Channel (RCA), built-in mic
Alarm Output	One (1) Channel (300 mA, 12 VDC)

Power

Power Supply	12 V ± 30% DC
Power Consumption	Maximum 10.5W (12 VDC with illuminator on)

Environment

Operating Conditions	−40 °C to +60 °C (−40 °F to +140 °F) Less than 95% RH (non-condensation)
Storage Conditions	−40 °C to +60 °C (−40 °F to +140 °F) Less than 95% RH (non-condensation)
Ingress Protection	IP67

Construction

Casing	Metal
Dimensions	Φ122.0 mm × 110.9 mm (Φ4.8" × 4.37")
Net Weight	0.70 kg (1.54 lb)
Gross Weight	0.96 kg (2.12 lb)

1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 , the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

Ordering Information

Type	Part Number	Description
5MP HDCVI Camera	A52CJC2	5MP TiOC HDCVI 2.8 mm Fixed Lens Eyeball Camera
Accessories (Optional)	PFA130-E	Junction box
	PFB203W	Wall Mount Bracket (use alone or with PFA152-E)
	PFA152-E	Pole Mount Bracket (use with PFB203W)
	PFM321D	12V 1A Power Adapter
	PFM904	Integrated Mount Tester
	PFM800-4K	Passive HDCVI Balun

Junction Box PFA130-E	Wall Mount PFB203W	Ceiling Mount

Pole Mount PFA152-E + PFW203W		

Accessories

Optional:

PFA130-E
Water-proof Junction Box

PFB203W
Wall Mount Bracket

PFA152-E+PFB205W
Pole Mount Bracket +
Wall Mount Bracket

PFM800-4K
Passive HDCVI Balun

PFM321D
12 V 1A Power Adapter

PFM904
Integrated Mount Tester

Dimensions (mm[inch])

mm [inch]

110.9 [4.37]

3-Ø4.5 [Ø0.18]

ØB4.0 [Ø3.31]

Ø122.0 [Ø4.80]

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