

# TDOECS520LIR2A

## 5MP Smart Dual Light HDCVI Fixed-focal Eyeball Camera



### Functions

#### Broadcast-quality Audio

Audio signal transmission over coaxial cables is supported by the HDCVI camera. It adopts a unique audio processing and transmission technology that restores source audio and eliminates noise, ensuring the quality and reliability of the audio information that is collected. This becomes important for video surveillance applications that use audio information as a type of supplementary evidence.

#### Smart Dual Light

With its smart dual light mechanism, the camera automatically turns on the white light when Perimeter Protection/SMD Plus function of AI XVR detects a target in the rule area to capture clear, vivid images. When the target leaves the rule area, the camera automatically switches over from the white light to the IR light to significantly reduce light pollution.

#### Super Adapt

With its intelligent algorithm, the camera automatically adjusts its parameters to provide optimal performance and vivid images.

#### Protection (IP67, Wide Voltage)

**IP67:** The camera passed a series of rigorous dust and immersion tests. Its enclosure is both dust-proof and waterproof, and can function normally while being immersed in 1 m deep water for up to 30 minutes.  
**Wide voltage:** The camera has  $\pm 30\%$  input voltage tolerance (for some power supplies) and a wide voltage range, making it suitable for a variety of outdoor scenarios.

- Max 25 fps@5MP (16:9 video output).
- Smart Dual Light.
- 20m illumination distance
- Super Adapt.
- Built-in MIC.
- 2.8mm fixed lens
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.



#### 4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals (video, audio\*, data and power) 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. HDCVI technology also supports PoC, which makes the camera easy and quick to install.

#### Long Distance Transmission

HDCVI technology provides long distance transmission in real time without transmission loss. It supports transmission distances up to 700m for 2-MP/5-MP/8-MP HD videos through coaxial cables, and up to 300m through UTP cables. The results were obtained and verified through rigorous testing in Tough Dog's test laboratory.

#### Simplicity

HDCVI technology inherits the simplicity of traditional analog surveillance systems, making it a great mechanism for protecting your valuables. HDCVI can be upgraded from the traditional analog system without replacing the existing coaxial cabling. Its plug and play design enables it to produce high-definition videos during surveillance without the hassle of configuring a network.

#### Multi-language OSD

The OSD offers multiple functions to meet the many requirements of a monitoring scene, such as backlight mode, day/night mode, white balance, privacy mask, and motion detection. 11 languages are available for OSD: Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

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## Technical Specification

### Camera

Image Sensor	5 MP CMOS
Max. Resolution	2880 (H) × 1620 (V)
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25 s–1/100000 s NTSC: 1/30 s–1/100000 s
Min. Illumination	0.05 lux@F1.6 (Color, 30 IRE) 0.005 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>65 dB
Illumination Distance	IR: 20 m (65.62 ft) Warm Light: 20 m (65.62 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	1 (Warm light);1 (IR light)
Angle Adjustment	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

### Lens

Lens Type	Fixed-focal				
Lens Mount	M12				
Focal Length	2.8 mm				
Max. Aperture	F1.6				
Field of View	2.8 mm: H: 106°; V: 56°; D: 125°				
Iris Control	Fixed				
Close Focus Distance	2.8 mm: 0.8 m (2.62 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	56 m (183.73 ft)	22.4 m (73.49 ft)	11.2 m (36.75 ft)	5.6 m (18.37 ft)

### Video

Video Frame Rate	CVI: PAL: 5M@25 fps; 4M@25 fps; 1080p@25 fps; NTSC: 5M@25 fps; 4M@30 fps; 1080p@30 fps AHD: PAL: 4M@25 fps; NTSC: 4M@30 fps TVI: PAL: 4M@25 fps; NTSC: 4M@30 fps CVBS: PAL: 960H; NTSC: 960H
Resolution	5M (2880 × 1620); 4M (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480)
Day/Night	Auto(ICR)/Color/B/W
BLC	BLC; HLC; DWDR
WDR	DWDR
White Balance	Auto;Area white balance

Gain Control	Auto/Manual
Noise Reduction	2D NR
Illumination Mode	Smart IR&WL; WL Mode; IR Mode
Mirror	Yes
Privacy Masking	Off/On (8 areas, rectangle)

### Certification

Certifications	CE-LVD: EN 62368-1; CE-EMC: EN 55032; EN 55035; FCC: 47 CFR FCC Part 15, Subpart B; UL: UL62368-1 + CAN/CSA C22.2 No. 62368-1-14
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### Port

Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port
Audio Input	One channel built-in mic

### Power

Power Supply	12 VDC ± 30%
Power Consumption	Max 3.1 W (12 VDC, WLED on)

### Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	<95% (RH), non-condensing
Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Storage Humidity	<95% (RH), non-condensing
Protection	IP67

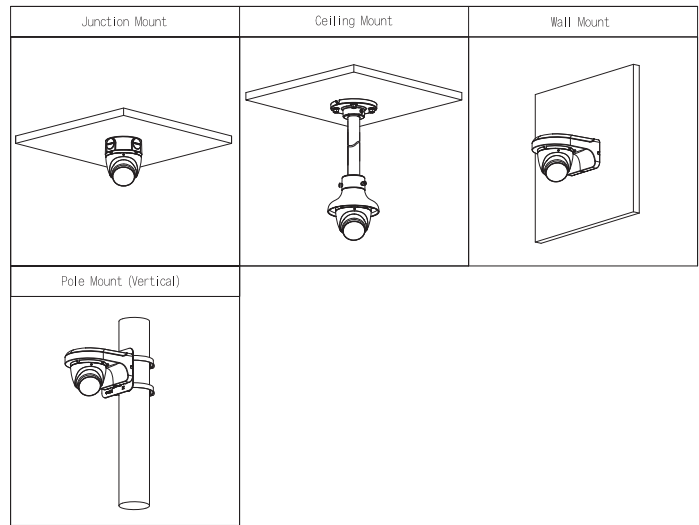
### Structure

Casing Material	Metal
Product Dimensions	φ94.0 mm × 85.7 mm (φ3.70" × 3.37")
Net Weight	0.31 kg (0.68 lb)
Gross Weight	0.43 kg (0.95 lb)
Installation	Wall mount; ceiling mount; vertical pole mount

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## Ordering Information

Type	Model	Description
5M Camera	TDOECS520LIR2A	5MP Smart Dual Light HDCVI Fixed-focal Eyeball Camera



## Dimensions (mm [inch])

