

DHI-ITC952-AU3F-IRL7ZF1640

9MP All-in-one IR AI Enforcement Camera



- GS-CMOS image sensor.
- 4096 × 2824@50 fps.
- Video compression standards: H.265, H.264M, H.264H and MJPEG.
- Integrated design, IP66 rated.
- 730 nm IR illumination.

Key feature (under recommended installation and light condition):

- Lane coverage : 1-3 lanes
- Capture speed range : 5~250 KM/h
- Capture rate: >99%
- LPR accuracy: >98%

System Overview

With its high-performance AI processor, 9MP All-in-one IR AI Enforcement Camera delivers excellent quality images even in the toughest weather conditions. For monitoring, it uses deep learning algorithms and traffic-specific, GS-CMOS image sensors with a wide dynamic range and high frame rate. The IR illuminators supplement light when the camera captures license plates without using the external flashing light or strobe, significantly reducing light pollution.

Functions

Reduced light pollution

The IR illuminators supplement light when the camera captures license plates without using the external flashing light or strobe, significantly reducing light pollution.

Ultra-high frame rate

Uses traffic-specific, high-performance GS-CMOS image sensors with a wide dynamic range, high frame rate, and high signal-to-noise ratio, displaying realistic video images in the day and night.

Video metadata

Deep learning algorithms and a high-performance AI processor allow the camera to detect and extract detailed information on motor vehicles, providing a reliable data source that can be used in making effective decisions.

Applicable to various road scenes

Ideal for scenarios where license plate recognition is needed, the camera is capable of capturing more than ten different types of traffic violations, and supports traffic information collection and event detection. It is suitable for road scenarios.

Multi-dimensional data sensing

Using GPS positioning and behavior detection by electronic gyroscope, the camera realizes multi-dimensional data sensing.

Scene

The camera is ideal for use in intelligent traffic management and for smart city businesses. It is capable of detecting traffic violations, capturing license plates, generating passing vehicle records, collecting traffic data, and detecting events.

Technical Specification

Camera

Image Sensor	1/1" GS-CMOS
Shutter Mode	Single shutter; Double shutter; Three shutters
Electronic Shutter Speed	50 Hz: 1/50 s~1/100,000 s (auto; manual) 60 Hz: 1/60 s~1/100,000 s (auto; manual)
Noise Reduction	3D NR; 2D NR
S/N	48 dB
WDR	90 dB
Minimum intensity	0.001 lux
Day/Night	Supports ICR auto switch: IR cut-off filter (IRCF) with the polarizing filter is used during the daytime, and switches to the IR transmitting filter at night

Illuminator

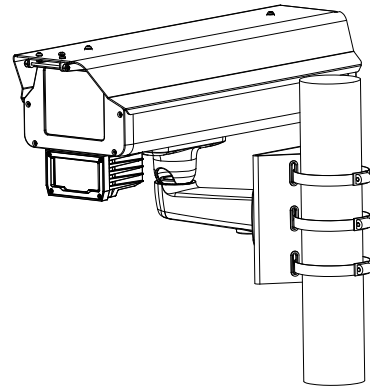
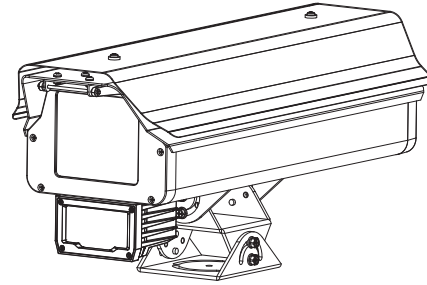
Illuminator Number	8
IR	730 nm
Illumination Distance	23 m~30 m (75.46 ft~98.43 ft) (adjustable brightness)
IR Covered lane	3 lanes

Lens		Video Resolution	4096 × 2824; QFHD (3840 × 2160); 1080p (1920 × 1080); UXGA (1600 × 1200); 720p (1280 × 720)
Lens Type	Motorized vari-focal	Video Frame Rate	50 Hz: Maximum 50 fps; default main stream (4096 × 2824@25 fps), sub stream (1600 × 1200@25 fps) 60 Hz: Maximum 30 fps; default main stream (4096 × 2824@25 fps), sub stream (1600 × 1200@25 fps)
Focal Length	16 mm–40 mm	Video Bit Rate	H.264: 32 kbps–32768 kbps H.265: 32 kbps–32768 kbps MJPEG: 512 kbps–32768 kbps
Max. Aperture	F1.5	Bit Rate Control	CBR; VBR
Aperture Type	P iris	White Balance	Auto/night/custom color temperature
Field of View	Horizontal: 21.2°–50.1° Vertical: 14.7°–34.4° Diagonal: 25.3°–60.3°	Edge Enhancement	Yes
Function		HLC	Yes
Trigger Mode	Video detection; radar	BLC	Yes
OSD Overlay	Time, address, lane No., plate, plate color, and more.	Bad Pixel Correction	Yes
Alarm Event	Storage full, storage error, external alarm, no storage card, license plate blacklist, illegal access, network disconnection, and IP conflict	Gain Scope	0–100
Automatic Network Replenishment (ANR)	Platform and FTP (TF card is required)	image	
Auto Registration	Yes	Composite Image	Supports composing 1, 2, 3, or 4 images
Intelligence		Image Resolution	4096 (H) × 2824 (V) (OSD black background is not calculated in the pixels)
Target Detection	Motor vehicle; motorcycle	Image Encoding Format	JPEG
Face Detection	Detects the driver and front-seat passenger of motor vehicles, and motorcycle drivers; extracts face images	Image Tampering Prevention	Watermark and verification are available for videos and images
ANPR	Adopts Dahua developed algorithms to recognize license plate numbers and letters	Network	
Vehicle Type Recognition	Vehicle head: Large bus, heavy truck, medium truck, sedan, van, light truck, medium bus, SUV, MPV, and pickup Vehicle tail: SUV, large bus, sedan, light truck, pickup, medium truck, van, and heavy truck	Network Port	2 RJ-45 Ethernet ports, 10/100/1000 M network transmission
Vehicle Color Recognition	White, pink, black, red, yellow, gray, blue, green, orange, purple, brown, and silver gray (color recognition is not supported during the nighttime)	SDK and API	Yes
Vehicle logo	Vehicle head mode: Acura, Alfaromeo, Ashokleyland, Astonmartin, Audi, Baic, Bently, Benz, BMW, Buick, BYD, Cadillac, Chery, Chevrolet, Chrysler, Citroen, Dacia, Daihatsu, Datsun, Dodge, DS, Ferrari, Fiat, Force, Ford, Foton, Geely, GMC, Greatwall, Hino, Honda, Hyundai, Infiniti, Isuzu, Iveco, Jac, Jaguar, Jeep, Kia, Kinglong, Land, Lexus, Lifan, Lincoln, Mahindra, MAN, Maserati, Mazda, Mercury, MG, Mini, Mitsubishi, Nissan, Opel, Peugeot, Porsche, Renault, Rollsroyce, Saab, Scania, Seat, Skoda, Smart, Subaru, Suzuki, Tata, Tesla, Toyota, UD, Volkswagen, Volvo	Security	Authorized username and password, MAC address binding, HTTPS encryption, and network access control
Motor Vehicle Violation Snapshot	ANPR mode: Wrong-way driving, speeding, driving slow, crossing the white solid line, crossing the yellow solid line, illegal lane change E-Police mode: Running a red light, wrong-way driving, crossing the white solid line, crossing the yellow solid line, disobeying the lane direction sign, disobeying the direction arrow, illegal left turn, illegal right turn, illegal U-turn (not supported by side-mounted cameras), and crossing the stop line	Protocol	IPv4; IPv6; HTTP; TCP; IP; UDP; NTP; DHCP
Motorcycle vehicle Violation Capture	Captures traffic violations including carrying passenger, not wearing helmet, and wrong-way driving	Interoperability	ONVIF (Profile S/Profile G/Profile T)
Traffic Flow Detection	Generates statistics on vehicle flow, queue length, average speed, lane occupancy, and more.	Browser	IE: IE 9-IE 11 Chrome: Chrome 41 and earlier Firefox: Firefox 49 and earlier Win10 needs to open the browser with administrator rights
Traffic Event	Motor vehicle illegal stopping on the roadway, traffic congestion	Positioning	GPS
Video		Time Synchronization	NTP; GPS
Video Compression	H.265; H.264M; H.264H; MJPEG	Port	
		Storage	1, supports maximum 256 GB TF card local storage
		Iris Control	1, connects to DC iris or P iris
		Focus Control	1, connects to motorized vari-focal lens
		Frequency Source Sync	1, supports synchronizing the camera with the mains electricity
		Peripheral Light	7, optocoupler signal output (can be configured as flashing light or LED strobe sync output port, frequency adjustable)
		USB	2 USB 2.0 ports
		RS-485	2, connects to devices such as signal detector, strobe, continuous light, and all-in-one illuminator

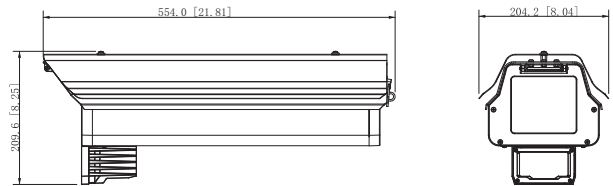
RS-232	4 (1 is used for serial debugging and 3 for connecting to radars)
I/O	4, same functions as ALARM IN port
Audio Input	1, 3.5 mm (0.14") jack
Audio output	1, 3.5 mm (0.14") jack
Alarm Input	4, same functions as I/O port
Alarm Output	2 (AO1 is for relay output and AO2 for optocoupler output)
Power Output	12 VDC ±10% voltage output, ≤ 1.5 A current output

General

Power Supply	100–240 VAC, 50 Hz/60 Hz
Power Consumption	≤ 20 W
Operating Temperature	–40 °C to +65 °C (–40 °F to +149 °F)
Storage Temperature	–40 °C to +70 °C (–40 °F to +154 °F)
Operating Humidity	10%–90%
Storage Humidity	10%–90%
Protection	IP66
Certifications	CE: 4789630630-1, FCC: 4789630630-2
Product Dimensions	554.0 mm × 204.2 mm × 209.6 mm (21.81" × 8.04" × 8.25") (L × W × H)
Net Weight	4.6 kg (10.14 lb)
Gross Weight	6.6 kg (14.55 lb)
Installation	Center mount; Side mount



Dimensions (mm [inch])



Ordering Information

Type	Model	Description
AI Enforcement Camera	DHI-ITC952-AU3F-IRL7ZF1640	9MP all-in-one IR AI enforcement camera
Accessories (Optional)	8018	3-dimensional universal mounting bracket (purchase separately)

Accessories

Optional:



8018
3-dimensional universal mounting bracket
(purchase separately)