DHI-ITC352-AU3F-IRL8ZF1640

3MP All-in-one IR AI Enforcement Camera

- GS-CMOS image sensor.
- 2048 × 1536@50 fps.
- Video compression standards: H.265, H.264M, H.264H and MJPEG.
- Integrated design, IP66 rated.
- 850 nm IR illumination.

Key feature (under recommended installation and light condition):
- Lane coverage : 1-2 lanes
- Capture speed range : 5~250 KM/h
- Capture rate: >99%
- LPR accuracy: >98%

System Overview

With its high-performance AI processor, 3MP 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	2/3" 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	850 nm
Illumination Distance	23 m–30 m (75.46 ft–98.43 ft) (adjustable brightness)
IR Covered lane	2 lanes

Lens

Lens Type	Motorized vari-focal
Focal Length	16 mm–40 mm
Max. Aperture	F1.5
Aperture Type	P iris
Field of View	Horizontal: 12.8°–30.28° Vertical: 7.2°–16.96° Diagonal: 13.2°–30.9°

Function

Trigger Mode	Video detection; radar
OSD Overlay	Time, address, lane No., plate, plate color, and more.
Alarm Event	Storage full, storage error, external alarm, no storage card, license plate blocklist, illegal access, network disconnection, and IP conflict
Automatic Network Replenishment (ANR)	Platform and FTP (TF card is required)
Auto Registration	Yes

Intelligence

Target Detection	Motor vehicle; motorcycle
Face Detection	Detects the driver and front-seat passenger of motor vehicles, and motorcycle drivers; extracts face images
ANPR	Adopts Dahua developed algorithms to recognize license plate numbers and letters
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
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)
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
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
Motorcycle vehicle Violation Capture	Captures traffic violations including carrying passenger, not wearing helmet, and wrong-way driving
Traffic Flow Detection	Generates statistics on vehicle flow, queue length, average speed, lane occupancy, and more.
Traffic Event	Motor vehicle illegal stopping on the roadway, traffic congestion

Video

Video Compression	H.265; H.264M; H.264H; MJPEG
Video Resolution	3M (2048 × 1536); UXGA (1600 × 1200); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576); CIF (352 × 288)
Video Frame Rate	50 HZ: Maximum 50 fps; default main stream (1536 × 2048@25 fps), sub stream (1600 × 1200@25 fps) 60 HZ: Maximum 60 fps; default main stream (1536 × 2048@25 fps), sub stream (1600 × 1200@25 fps)
Video Bit Rate	H.264: 32 kbps–32768 kbps H.265: 32 kbps–32768 kbps MJPEG: 512 kbps–32768 kbps
Bit Rate Control	CBR; VBR
White Balance	Auto; night; custom color temperature
Edge Enhancement	Yes
HLC	Yes
BLC	Yes
Bad Pixel Correction	Yes
Gain Scope	0–100

image

Composite Image	Supports composing 1, 2, 3, or 4 images
Image Resolution	2048 (H) × 1536 (V) (OSD black background is not calculated in the pixels)
Image Encoding Format	JPEG
Image Tampering Prevention	Watermark and verification are available for videos and images

Network

Network Port	2 RJ-45 Ethernet ports, 10/100/1000 M network transmission
SDK and API	Yes
Security	Authorized username and password, MAC address binding, HTTPS encryption, and network access control
Protocol	IPv4; IPv6; HTTP; TCP; IP; UDP; NTP; DHCP
Interoperability	ONVIF (Profile S/Profile G/Profile T)
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
Positioning	GPS
Time Synchronization	NTP; GPS

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)