

DH-SPL-01

Dahua 12MP All-in-One Enforcement Camera



System Overview

With its high-performance AI processor, 12MP 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.

Multi-dimensional Data Sensing

Using GPS positioning, the camera realizes multi-dimensional data sensing.

*Algorithm Training for New Updates : need dataset to train.

- GS-CMOS image sensor.
- 4096 x 3072@25 fps.
- Video compression standards: H.265, H.264M, H.264H and MJPEG.
- Works in poor lighting and does not smear.
- High-speed capture.
- Integrated design, IP66 and IK10 rated.
- Under recommended installation and lighting conditions: Capture rate > 99% LPR accuracy > 98%
- Environmental Protection by Customization: Heater, Fan.

Safe and Reliable Performance

Built to withstand the toughest conditions, this camera functions in a wide temperature and voltage range. It has a built-in lightning protection module. Feel safe using it in all-weather types.

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.

Turkish National Police Attachment-18 Compatability

Platurk integration ; Vehicle Pass Message, Health Status Message, Automatic Update Message, Data Transmission Status Message, Time Query Message, Firmware Update Message, Instant Status Query Message, Live Video, Web interface Functions

Certification

TS13788 EDS Certification, Ministry of Science and Technology Type Approval Certificate

Supported Licence Plate Types

Reflective and Unreflective licence plate surface

Driver and CoPilot Face Silhoutte

High power infrared, Burst/Flash light, Strobe light

Automatic Network Replenishment :

When network connection is disconnected, vehicle data are stored in Sd card, when re-establish, transfer all vehicle data(s) to ANPR Server through FTP. Multiple File Transfer support.

Plug-in :

ActiveX

Lens MTF Parameter :

Resolution : Designed for 140 LP/mm

MTF Measured in the Center at 90 LP/mm / 140 LP/mm : 0.64 / 0.44

MTF Measured in the Corner at 90 LP/mm / 140 LP/mm : 0.52 / 0.33

| Technical Specification | |
|---|---|
| Camera | |
| Image Sensor | 1.1" GS-CMOS |
| Shutter Mode | Single shutter; Double shutters; Three shutters |
| Electronic Shutter Speed | Auto/Manual 1/50 s–1/100,000 s |
| Noise Reduction | 3D NR |
| S/N Ratio | 48 dB |
| WDR | 120 dB |
| Min. Illumination | 0.001 lux |
| Day/Night | ICR auto switch: Uses IR cut-off filter (IRCF) with polarizer in the daytime, and uses ordinary filter at night. |
| Illuminator | |
| Illuminator Number | 8 |
| IR Light | Yes, 850nm wavelength high power led |
| Illumination Distance | 23 m-30m (75.46 ft–98.43 ft) (brightness adjustable) |
| Lane Coverage | Center mount: 4 lanes Side mount: 3 lanes |
| Lens | |
| Lens Type | Motorized Vari-focal |
| Focal Length | 16 mm–40mm |
| Max. Aperture | F1.5 |
| Iris Type | P-Iris |
| Field of View | Horizontal: : 22.3°–53.0° Vertical: 13.8°–32.3° Diagonal: 26.0°–61.9° |
| Function | |
| Trigger Mode | Video trigger/Radar trigger |
| OSD Overlay | Time; address; lane No.; plate; plate color; and more |
| Alarm Event | Storage full; storage error; external alarm; no storage card; license plate blacklist; illegal access; network disconnection; IP conflict |
| Automatic Network Replenishment (ANR) | Platform and FTP (TF card is required) |
| Auto Registration | Yes |
| Intelligence | |
| Target Detection | Motor vehicle; motorcycle |
| Speed Detection Range | 0 km/h–300 km/h |
| Face Detection | Detects the driver and front-seat passenger of motor vehicles, and motorcycle drivers; extracts face images |
| ANPR | Adopts developed algorithms to recognize license plate numbers and letters |
| Vehicle Type Recognition | Accuracy rate : >=85% Vehicle head: SUV, Large bus, sedan, light truck, pickup, heavy truck, medium truck, van, medium bus, MPV |
| Accuracy (under recommended installation and lighting conditions) | Capture rate > 99%; LPR accuracy > 98% |

| | |
|---------------------------------|--|
| Vehicle Color Recognition | White, pink, black, red, yellow, gray, blue, green, dark orange, purple, brown, and silver gray (Accuracy rate : >=85% daytime) |
| Vehicle Brand/Logo Recognition | Vehicle head mode: Acura, Alfa Romeo, Ashokleyland, Aston Martin, Audi, Baic, Bentley, 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, Rolls Royce, Saab, Scania, Seat, Skoda, Smart, Subaru, Suzuki, Tata, Tesla, Toyota, UD, Volkswagen, Volvo (Accuracy rate : >85%) |
| Motor Vehicle Violation Capture | ANPR mode: Wrong-way driving, speeding, driving slow, crossing the white solid line, crossing the yellow solid line, illegal lane change, unfasten seat belt, calling while driving, smoking while driving E-Police mode: Running a red light, wrong-way driving, crossing the solid white line, crossing the solid yellow line, disobeying the direction arrow, illegal left turn, illegal right turn, illegal U-turn (not supported by side-mounted cameras), and crossing the stop line |
| Motorcycle 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 | 4096 (H) × 3072 (V) |
| Video Frame Rate | default main stream (4096 × 3072@25 fps),(4096 × 2336@25 fps), sub stream (1600 × 1200@25 fps) 60 Hz: Maximum 30 fps; default main stream (4096 × 3072@15 fps), sub stream (1600 × 1200@15 fps) |
| Video Bit Rate | H.264: 32 kbps–32767 kbps H.265: 32 kbps–32767 kbps MJPEG: 512 kbps–32767 kbps |
| Bit Rate Control | CBR/VBR |
| White Balance | Auto; Night; Customized Color Temperature |
| Edge Enhancement | Yes |
| HLC | Yes |
| BLC | Yes |
| Bad Pixel Correction | Yes |
| Gain Range | 0-100 |

Image

| | |
|----------------------------|--|
| Composite Image | Supports combining up to 4 images into a composite image |
| Image Resolution | 4096 (H) × 3072 (V) (OSD black strip excluded) |
| Image Encoding Format | JPEG |
| Image Tampering Prevention | Verifies watermarks in videos and images |

Network

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|--------------|--|
| 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 |
| Network Protocol | IPv4/IPv6; HTTP; TCP/IP; UDP; NTP; DHCP,FTP,SMTP,RTSP,RTP |
| Interoperability | ONVIF (Profile S/Profile G/Profile T) |
| Browser | Microsoft Edge IE: IE9–IE11 Chrome: Chrome 41 and earlier Firefox: Firefox 49 and earlier For Win 10 users, run the browser as administrator |
| Positioning | GPS |
| Network Status Monitoring | NTP; GPS |

Port

| | |
|-----------------------|---|
| Storage | 1, TF card (maximum 256 GB@Class10) |
| Iris Control | 1, connects to DC auto 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 flash light or LED strobe sync output interface, frequency adjustable) |
| USB | 2 USB 3.0 Ports |
| RS-485 | 2, connects to devices such as signal detector, radar, and more |
| RS-232 | 4 (3 for radar connection, and 1 for serial port debugging) |
| I/O | 4, same functions as ALARM IN port |
| Audio Input | 1 channel (3.5mm JACK port) |
| Audio Output | 1 channel (3.5mm JACK port) |
| 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 \pm 10% voltage output, \leq 1.5 A current output |

General

| | |
|-----------------------|---|
| Power Supply | 100–240 VAC (50 Hz/60 Hz),PoE & 24VDC Customization |
| Power Consumption | \leq 20 W |
| Operating Temperature | –40 °C to +65 °C (–40 °F to +149 °F) |
| Storage Temperature | –40 °C to +70 °C (–40 °F to +158 °F) |
| Operating Humidity | 0%–90% (RH) |
| Storage Humidity | 0%–90% (RH) |
| Certifications | CEE234884-A6104-IT-4; 4790433450-2 FCC: 4790433450-1 |
| Protection | IP66, IK10 |
| Product Dimensions | 554.0 mm \times 204.2 mm \times 209.6 mm (21.81" \times 8.04" \times 8.25") (L \times W \times H) |
| Net Weight | 4.6 kg (10.14 lb) |
| Gross Weight | 6.6 kg (14.55 lb) |
| Installation | Center mount; side mount |

Ordering Information

| Type | Model | Description |
|------------------------|-----------|--|
| AI Enforcement Camera | DH-SPL-01 | All-in-One Enforcement Kamera |
| Accessories (Optional) | 8019 | 3-dimensional universal mounting bracket (purchase separately) |
| | 3012 | Side mounting bracket (purchase separately) |
| | PFA150 | Mounting bracket (purchase separately) |

Accessories

Optional:



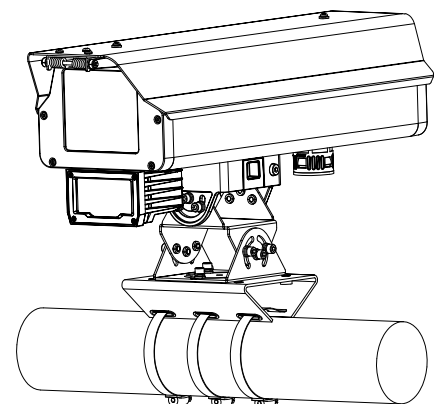
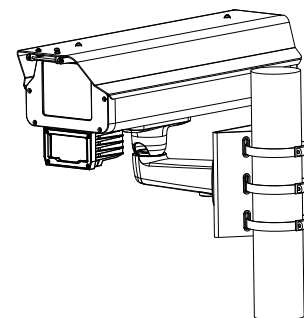
8019
3-dimensional
universal mounting
bracket (purchase
separately)



3012
Side mounting bracket
(purchase separately)



PFA150
Mounting bracket
(purchase separately)



Dimensions (mm [inch])

