

Safer Roads To A Sustainable Future



DAHUA INTELLIGENT TRAFFIC SOLUTION

Advanced · Reliable · Flexible · Safer



SPC



Glowlight



RVF



Deep Learning Algorithm

Safer Roads To A Sustainable Future

Dahua provides a variety of professional products and customized solutions for our global customers, truly solving local traffic challenges and creating more possibilities for the future development of intelligent transportation systems in cities and towns. Dahua aims to implement more low-carbon initiatives, promote green living and help cities develop sustainably.



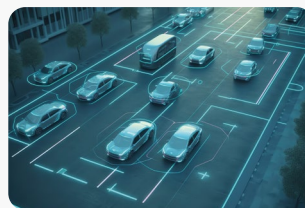
| Features

Business Convergence



- Traffic Violation
- Signal Control System
- Speed Enforcement
- Driver Behavior

High Precision



- SPC
- Glowlight
- RVF
- Deep Learning Algorithm
- Super Sensing

AI-based Enforcement Unit



- Edge Intelligence
- Cost Reduction

All-in-One Design



- Eco-friendly
- User-friendly

I Business Convergence

One violation enforcement unit integrates ANPR, traffic violation, speed measurement, traffic flow detection, and driver behavior analysis to meet the various needs of effective traffic enforcement.



Traffic Violation

Motor Vehicle

- Red light violation
- Wrong-way driving
- Crossing the solid line
- Illegal lane change
- Illegal turn
- Illegal parking
- Disobeying the direction arrow
- Crossing the stop line
- Failure to yield to pedestrians

Motorcycle

- Overloading
- Not wearing helmet
- Wrong-way driving



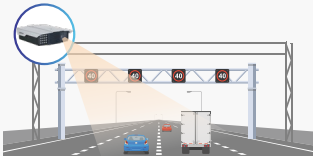
Signal Control System

- Traffic flow detection
- Traffic congestion
- Signal control



Speed Measurement

- Overspeed
- Driving slow
- Average speed



Driver Behavior Analysis

- Calling while driving
- Smoking while driving
- Not wearing seatbelt



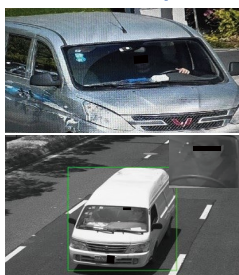
I High Precision



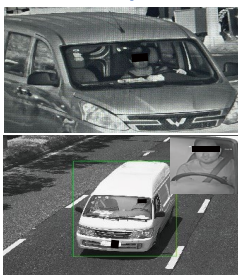
SPC: Enhanced all-day in-vehicle behavior analysis technology

Strong ambient light during the day can lead to insufficient illumination in the vehicle and reduce the data acquisition rate. Therefore, supplemental illumination of the target is required while suppressing the ambient light. SPC constructs an optical model by modulating the spectral channels and adding polarizers to effectively capture in-vehicle violations throughout the day.

Traditional Capture



SPC Capture



The SPC technology improves the image capturing of vehicle situation by at least **80%**



SPC Technology



Improved Sensor



SPC Flash Lamp

SAFER ROADS TO A SUSTAINABLE FUTURE

Dahua Intelligent Traffic Solution



Glowlight: Clear full-color image technology under ultra-low illumination

Dahua adopts industry-advanced GS-CMOS image sensor and high-performance AI processor, integrates deep learning algorithms, and upgrades image effect using DarkLight technology. It realizes clear images without color deviation under **80lx** ultra-low illumination, helps reduce light pollution while improving the effectiveness of traffic enforcement, and guarantees driving safety 24/7.

Adopts advanced image fusion technology to help solve light pollution



Utilizes the unique DarkLight engine; DarkLight technology

Ultra-sensitive sensor; Better effect, lower price



High-performance GS-CMOS image sensor; 50fps high frame rate

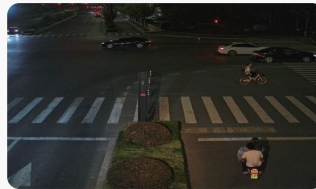


Image Optimization in Different Dark Light Scenes



In-vehicle Violation

Detailed rendering of dark areas



Target Following, Zoned Exposure

Simultaneous detection of people and cars in dark scenes



Dynamic Glare Suppression

License plate and windows visible at the same time



Ultra Depth of Field Technology in Low Light

License plates are visible in the entire area within 35 meters, while the image is enhanced in detail.



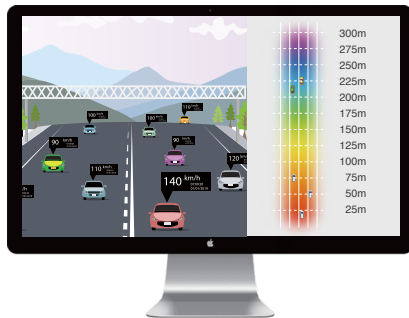
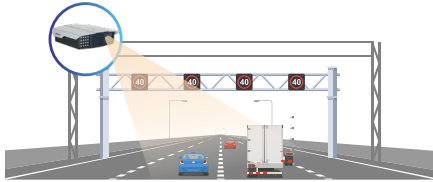
Traditional Capture



Glowlight Capture



RVF Technology: Radar and vision fusion



- The three-dimensional radar coordinate system is deeply integrated with the videos to provide more dimensional metadata, so as to ensure more accurate speed measurement and image capturing.
- Visual display shows the complete movement path of the vehicle in one page through RVF technology.
- Compared with traditional equipment on the market that can only measure instantaneous speed, the Spotter Series can ensure more effective and more accurate speed measurement by analyzing and comparing the collected data within a certain distance.



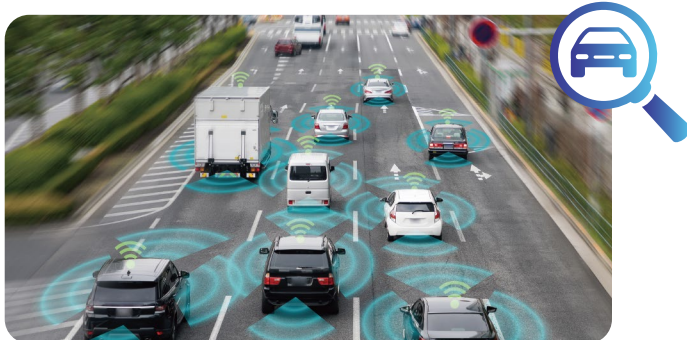
Deep Learning Algorithm: Innovative traffic algorithm



- **Vehicle Metadata:**
ANPR, Vehicle Color/Model/Logo
- **Traffic Violation Detection:**
Wrong-way Driving, Overspeeding, Underspeeding, Crossing Solid Line, Illegal Lane Changing, Illegal Turn, Phone Use While Driving, Smoking, Not Wearing Seatbelt/Helmet, Beating The Red Light, Traffic Congestion
- **High Accuracy:**
Capture rate: >99%; LPR Accuracy: >98%



Doppler Radar: Higher accuracy and wider coverage



- Speed Range: **5-300 km/h**
- Speed Measurement Error: **± 2%**
- Detection Target: **up to 128**
- Lane Coverage: **4/6/8 (optional)**

| AI-based Enforcement Unit



Edge Intelligence

- Our enforcement cameras simultaneously support violation detection, speed measurement, and traffic flow detection, realizing full-service edge intelligence in road scenarios.
- The number of devices is simplified from at least 3 to 1.



Cost Reduction

- Our traffic solution eliminates the need for intelligent servers and transmission devices.
- Reduces the cost of constructing an intersection surveillance by at least 80%.



| All-in-One Design



Energy Saving and Environmental Protection

- It presents an integrated design to generate a variety of product forms and meet various needs of customers.
- Save more equipment and installation costs, help energy saving and environmental protection, and advocate urban green development.



User-friendly

- This solution continuously offers customized and diverse product designs in order to meet customers' various scenario requirements, enhancing user-friendliness while also garnering positive results.



Benefits

Advanced

Besides our industry-leading deep learning algorithm, we've developed the industry's first SPC and Glowlight technology to improve sensing accuracy and image quality.

Reliable

Our vehicle algorithm has been successfully applied in more than 100 regions around the world. We will continuously provide professionalism in product design, R&D, manufacturing, application, and after-sale service.

Flexible

We are committed to develop customized solutions and products for various road scenes and traffic management regulations around the globe.

Safe

Safety is the first element of traffic management. Dahua has been leading the integrated traffic system in terms of accuracy and intelligence. With our all-in-one products, we are able to help build safer roads to a sustainable future with more global partners.

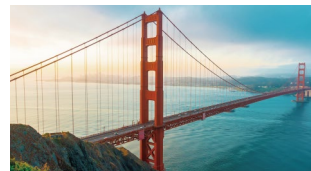
Applications



Intersection



Expressway



Bridge



Urban Road

Recommended Models

	ITC1652-AU5F-LZF1640 ITC1652-AU5F-IRL8ZF1640	ITC952-AU3F-LZF1640 ITC952-AU3F-IRL8ZF1640	ITC431-RW1F-L ITC431-RW1F-IRL8
AI Cameras			
Sensor	1.1" GS-CMOS	1.1" GS-CMOS	1/1.8" CMOS
Resolution	5320×3032	4096×2336	2688×1520
Speed Range for LPR	0~300km/h	0~300km/h	0~180km/h
LPR Monitor Distance	23~30 M	23~30 M	23~30 M
WDR	120 dB	120 dB	140 dB
Electronic Shutter Speed	1/50~1/100000 s	1/50~1/100000 s	1/50~1/100000 s
Lane Coverage	Center:5 / Side:4	Center:4 / Side:3	2
Protection Level	IK10; IP66	IK10; IP66	IK10; IP67
Scenario	E-police/Checkpoints	E-police/Checkpoints	Traffic Flow

SAFER ROADS TO A SUSTAINABLE FUTURE

Dahua Intelligent Traffic Solution

	Spotter Sky	Spotter Mobile	Spotter Master
Spotter Series			
Resolution	5320×3032/4096×2336	5320×3032	4096×2160
Speed Measurement	5~300km/h	5~300km/h	5~300km/h
Lane Coverage	Center: 5 / Side: 4	Side: 4	Side: 6
Target Detection	64	64	64
Lamp	White/IR	White/IR	White/IR
Shutter Speed	1/50-1/100,000 s	1/50-1/100,000 s	1/50-1/100,000 s
Memory	512G	1T	1T
Scenario	E-police/Checkpoints	Mobile Enforcement	E-police/Checkpoints
Certification	METAS	METAS	METAS

	ITALE-160BA-P3525 ITALE-160BA-IR8-P	ITALE-160BA-C3525 ITALE-160BA-IR8-C	ITALF-300AG
Supplementary Lights			
Scenario	Exterior of vehicles for ITC1652/952	Exterior of vehicles for ITC431	In-vehicle for ITC1652/952
Working Mode	Strobe Light	Continuous Light	
Light Source	White/IR	White/IR	White/IR
Lane Coverage	3	3	
Protection Level	IP66	IP66	IP66

	ITARD-024MA-H	ITARD-024MA-T6	ITACS-024SA-JB
Detectors			
Target Detection	128	64	1
Speed Measurement	5~300km/h	5~300km/h	5~300km/h
Lane Coverage	4	6	4
Scenario	Checkpoints	Checkpoints	Checkpoints
Frequency	24 GHz~24.25 GHz	24 GHz~24.25 GHz	24.15±0.045 GHz
Tracking Distance	10-110m	15-100 m	20-110m
Certification	IP66; METAS	IP66; METAS	CE

	ITRTSC-072B-HS	ITRTSC-036B-HS
Signal Controller		
Channel	72	36
Power Supply	Max. 60W	Max. 60W
Temperature	-40 °C to +80 °C (-40 °F to +176 °F)	-40 °C to +80 °C (-40 °F to +176 °F)
Certification	NTCIP/CE	NTCIP/CE

*Design and specifications are subject to change without notice.

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