Traffic Analytics and Central Command

Hikvision provides traffic agencies with road status updates for intelligent analysis and decision making, improving traffic efficiency by facilitating the smooth flow of vehicles throughout the city.

Hikvision's command interface presents traffic statuses and trends in real-time, providing

- Charts of average wait times, traffic volume, green light utilization rates, and other information at intersections
- Historical congestion information along road spans
- Alarm pop-ups and location tags overlaid on live traffic video feed

Charts for intersections



Product Showcase



Traffic Flow Cameras iDS-TCD403

- High-quality imaging with 4 MP resolution
- Color: 0.001 lux @ (F1.2, AGC ON)
- IP67, IK10
- · Multiple-target detection in up to six bidirectional lanes of up to 128 targets in total • Supports a vertical coverage of 200 m
- Multiple traffic data perceptions, including traffic flow, speed, status, queue, time headway, space headway, number of vehicles stopped in an area, space occupancy, and time occupancy



Radar-assisted Traffic Camera iDS-TCD402

- High-frequency millimeter-wave radar

- recognition and video structuring
- flow, speed, status, queue, time headway, space headway, number of vehicles stopped in an area, space occupancy, and time occupancy



Signal Lights JD300-3, FX300-3

- Central brightness: 5,000 to 15,000 cd/m²
- Visual distance: ≥ 400 m

- DX-3-T-1

- Equipped with red, yellow, and green light-emitting units that are powered independently
- Operating temperature: -40° to 80° C
- (-40° to 176° F)

- Central brightness: 5,000 to 15,000 cd/m² Visual distance: ≥ 400 m Equipped with red, yellow, and green
- light-emitting units
- Colored light and remaining time shown simultaneously
- Operating temperature: -40° to 80° C (-40° to 176° F)

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High-quality imaging with 4 MP resolution Multiple-target detection in up to six bidirectional lanes of up to 128 targets in total Deep learning algorithms for license plate Multiple traffic data perceptions, including traffic

Signal Light Timer



Signal Controller DS-TSC300

- Control and display panel to facilitate monitoring and adjusting signal status 44 channels of independently-controlled signal lights
- IP54 ingress protection for the cabinet GPS timing
- Operating temperature: -40° to 70° C (-40° to 158° F)



HikCentral Master Lite

- Remote management and configuration of network-connected signal controllers
- Integration of traffic signal control and video live view
- Supports intelligent traffic signal control modes including fixed-time control, fullyactuated control, semi-actuated control, adaptive control, coordinated green wave control, intersection group control, special task route control
- Intelligent operation and maintenance, such as signal controller operation status patrol and green wave operation failure monitoring
- AloT perception and fusion of comprehensive traffic information about vehicles, intersections, and events
- Traffic flow analytics for intersections and road sections

Smarter Signals, o **Smoother Flow**

Hikvision Traffic Order Management Solution

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Optimizing traffic flow and order in a city is the goal of municipal traffic agencies. Unfortunately, conventional traffic order management systems remain inefficient in reducing congestion and responding to critical events. They scarcely provide a comprehensive picture of the traffic situation, and cannot utilize traffic data to their fullest potential.

All of these factors make such systems inadequate for the ever-evolving demands of modern urban mobility.

agencies reduce bottlenecks on the roads and provide multidimensional data to support a better traffic system design.

Read on to see how Hikvision does it.

Traffic Data Perception Made Easy

Hikvision provides specifically designed video cameras and radar units to perceive traffic conditions at intersections and on the roadways. These AI-enabled devices detect regardless of the weather or light conditions.

Note: The last three types of traffic information on the list are proby Radar-assisted Traffic Cameras only.



Vehicle speed Lane traffic status Lane aueue lenath Time headway Space headway Space occupancy Average wait time

Network-Connected for Remote Management

Hikvision's network-connected signal controllers support remote control and management, reducing traffic agencies' efforts for on-site checking and configuration.

Traffic agencies can intuitively monitor the signal controller status on a map and manage the signal operation schedules at each intersection - all from the command center.

Combined with the cameras' live video feeds, operators can monitor traffic conditions at multiple intersections in real-time and make adjustments accordingly.



Signal controller status







Multi-intersection monitoring

Multiple Modes for Traffic Signal Control

Traffic signals must be programmed to suit the needs of each specific traffic multiple traffic signal control modes to help optimize safety, comfort, journey time, and fuel consumption iver chooses.

Single-Intersection Signal Control

Hikvision provides fixed-time, actuated, or adaptive signal control at an intersection.

Fixed-Time Signal Control

The fixed-time signal control mode helps to efficiently utilize the green-light phase at intersections where traffic volumes and patterns are consistent. It also suits newly constructed intersections.



2 Actuated Sianal Control

The actuated signal control mode extends the green time in congested directions within a reasonable range, optimizing travel through intersections with low or irregular traffic flows.



Main-road actuated control

3 Adaptive Signal Control

The adaptive signal control mode optimizes the time schedule of the next light cycle according to the traffic flow of the current light cycle. Cameras and radar continually perceive traffic flow of each cycle so that traffic conditions can be constantly evaluated to develop and improve the best signal timing.





based on time periods

Side-road actuated control

Fully-actuated control

Multi-Intersection Signal Control

Hikvision also provides dedicated signal control modes for maximum traffic efficiency across multiple intersections.

7 Static Green Wave Control

The static green wave control mode coordinates sequential signals on a major road to provide a non-stop travel experience for drivers traveling within a certain range of speeds, without stopping.

This optimizes the entire traffic flow in an area, eliminating costly delays and increasing overall efficiency.



HIKVISION



2 Special Task Route

The special task route mode provides traffic signal control for special tasks such as state visits by foreign leaders.

Traffic agencies can carry out special task route planning and route monitoring to ensure the smooth flow of vehicles along the route, reduce delays at red lights, and ensure the efficiency of the journey.

Roundabout Signal Control

Hikvision offers different signal control strategies depending on the traffic volumes at the roundabouts, allocating right of way to vehicles in terms of time and space, reducing traffic congestion and increasing roundabout capacity.

