



TrafficClair Monthly Updates

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ClairWav-T24/T80 Just Got Sharper

Now with 8MP, at No Extra Cost!

Higher Resolution, Unchanged Budget

Free 8MP Upgrade. Now Featuring the ClairWav-T24/T80.



Superior Vehicle Classification
Accurate License Plate Recognition

What's New:

- Crisp 8MP Resolution – Capture ultra-clear video at up to 3820×2160
- Drastically Improved Accuracy – Achieve superior vehicle classification and license plate recognition
- Advanced Radar-Video Fusion – Seamlessly integrate radar tracking with high-definition imaging
- Superior Low-Light Performance – See clearly even in 0.01lux conditions
- Smart Features – Including H.265+ encoding, WDR, de-fog, and digital noise reduction

[Detailed News](#)

[Product Webpage](#)

Camera Specs & Vehicle Classifications

8MP Camera Specs

Camera integrated Radar	Supports radar and video coordinate fusion.
Lens	16mm focal length, FOV 31*27.5*15.5
Minimum illumination	0.01lux (F1.6, AGC ON)
Resolution	Maximum 3820*2160
Smart encoding	H.265+
Frame rate	(1-25) frames per second, adjustable
Bitrate	32 Kbps-16 Mbps
ONVIF Protocol	Support
Day/night switching	IR-CUT automatic switching
De-fog	Support
WDR (Wide Dynamic Range)	Support
Digital noise reduction	Support
White balance	Support
OSD	Support

Vehicle Classifications

	Radar	Video integrated Radar
1	Length <5m	Sedan
2	Length between 5-15m	SUV/MPV
3	Length >15m	Bus (public bus, coach)
4		Medium-sized passenger van (e.g., bread van, Coaster)
5		Small truck
6		Medium truck
7		Large truck
8		Construction vehicle
9		Motorcycle (including electric motorcycles)
10		Tricycle
11		Bicycle
12		Pedestrian

Advantages of Camera Integrated Radar

1. Intuitive Display:

Video can show the targets detected by radar in real-time, allowing operators to visually observe the movement and characteristics of the targets.

2. Accurate Identification:

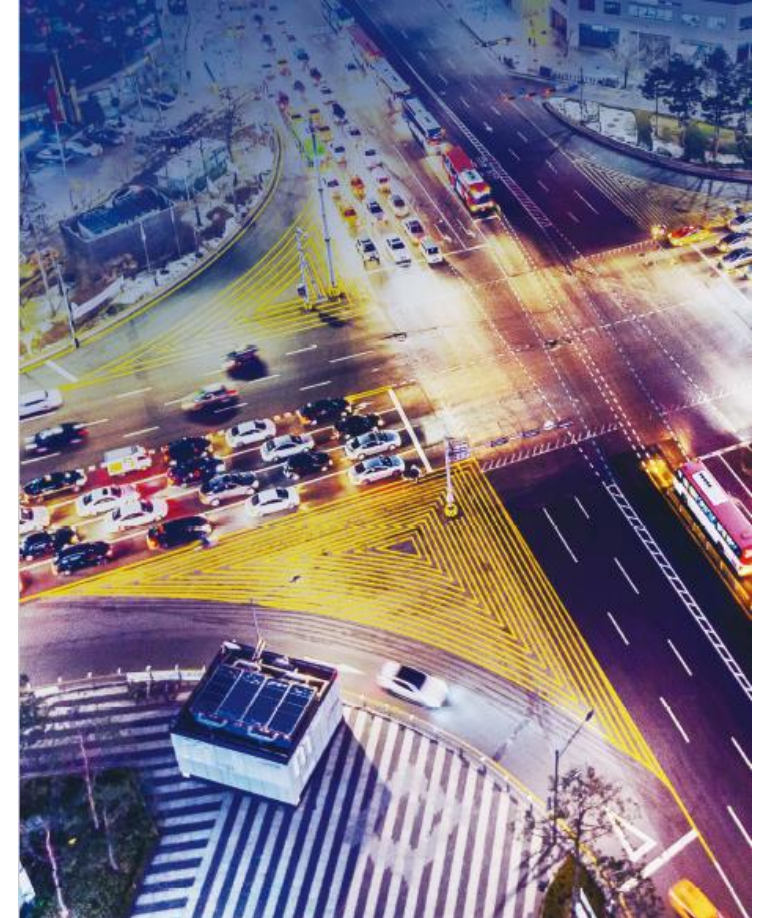
Video can provide more target information, such as shape and color, and when combined with radar detection data, targets can be identified more accurately.

3. Multi-target Tracking:

The multi-target tracking capability of phased array radar, combined with video technology, allows for simultaneous tracking of multiple targets, with each target marked and displayed on the video.

4. Data Fusion:

By integrating radar data with video data, more comprehensive and accurate target information can be obtained, improving the overall performance of the system. With this radar, video can supplement radar's ability to detect stationary targets that might otherwise be missed and increase the accuracy



Enhancing Urban Traffic Signal Control with Camera-Integrated Radar Systems

Camera Integrated Radar



Communication Protocol

0x01
ObjectData

0x02
RegionData

0x03
TrafficData

0x04
LaneStatus
Data

0x05
PassData

0x06 ^{New}
EventData

1. Real-Time Traffic State Perception & Adaptive Signal Control

Target Trajectory Data (ObjectData) provides real-time position, speed, acceleration, and direction of each vehicle or object. This allows:

2. Traffic Flow Optimization

Traffic Flow Statistics (TrafficData) includes: vehicle counts per lane and type (car, bus, truck, etc.) and average speed, headway, occupancy, and queue length

3. Lane-Level Management and Prioritization

Lane Status Data (LaneStatusData) provides queue length, head/tail position, number of queued vehicles, and real-time spacing, lead/trailing vehicle speed

4. Multi-Modal Traffic Support

Vehicle Type Classification (from both ObjectData and TrafficData) distinguishes: Cars, buses, trucks, motorcycles, bicycles, and pedestrians

5. Intersection Performance Monitoring

6. Real-Time Incident and Anomaly Detection

7. Data-Driven Planning and Simulation

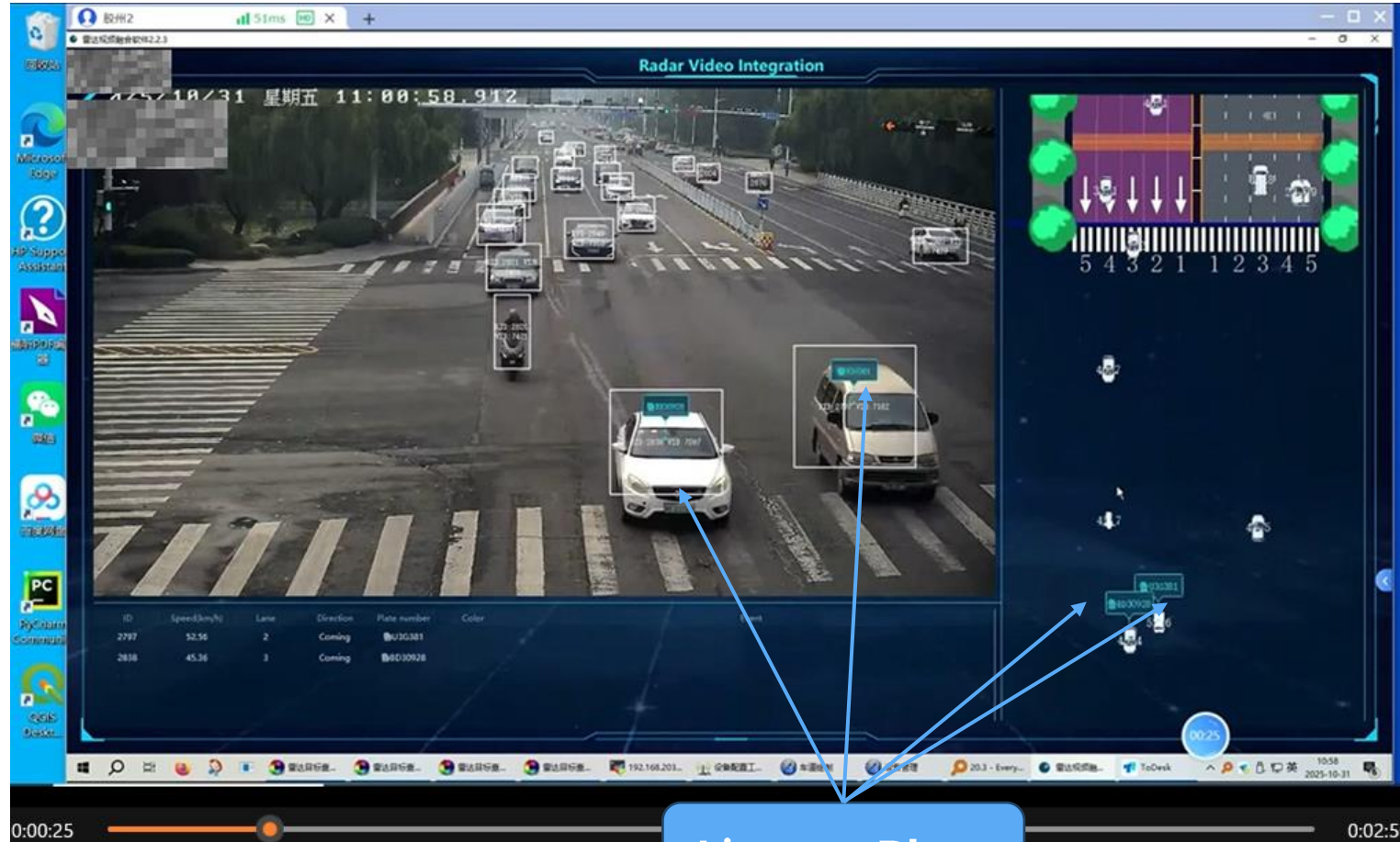
8. Enhanced Coordination Between Intersections

9. Support for Smart City and V2X Applications

[Detailed News](#)

[Communication Protocol](#)

Plate Number Identification with ClairWav Radar-Camera Fusion

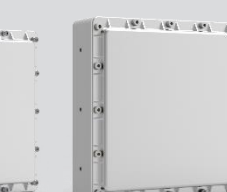


The ClairWav microwave radar family, now integrated with a high-resolution 8MP camera, enables real-time vehicle license plate recognition (LPR). This advanced fusion of radar tracking and visual data provides a powerful tool for precise vehicle trajectory tracing and automated traffic enforcement.

To ensure high accuracy across different regions, the system can be customized through training on a localized dataset of license plates.

[Check Video on Youtube](#)
[Product Webpage](#)

ClairWav Microwave Radar Family

T24L	T24S	T24LC	T24SC	T24-700	T24-700C	T80L	T80LC	U24
24GHz	24GHz	24GHz	24GHz	24GHz	24GHz	80GHz	80GHz	24GHz
Traffic Control	Traffic Control	Traffic Control	Traffic Control	Traffic Control	Traffic Control	Traffic Control	Traffic Control	Tunnel
								
Vehicle detection distance up to 400m	Vehicle detection distance up to 250m	Vehicle detection distance up to 400m, integrated with an 8M video camera	Vehicle detection distance up to 250m, integrated with an 8M video camera	Vehicle detection distance up to 700m	Vehicle detection distance up to 700m, integrated with an 8M video camera	Vehicle detection distance up to 350m	Vehicle detection distance up to 350m, integrated with an 8M video camera	Vehicle detection distance up to 400m
12 lanes 256 targets 64 cross section bars	12 lanes 128 targets 64 cross section bars	12 lanes 256 targets 64 cross section bars	12 lanes 128 targets 64 cross section bars	14 lanes 512 targets 64 cross section bars	14 lanes 512 targets 64 cross section bars	8 lanes 256 targets 64 cross section bars	8 lanes 256 targets 64 cross section bars	2 lanes 128 targets 64 cross section bars

Radar Application Scenarios



City
Intersections

ClairWav-T24/T80/T24-700



Highway

ClairWav-T24/T80/T24-700



Tunnel

ClairWav-T24/T80/T24-700

Radar Frequency Options

24GHz	80GHz	94GHz
- Traffic Control: T24, T24-700 - Tunnel Management: U24	Traffic Control T80	Traffic Control T94
Traditionally used globally for traffic monitoring but is now being phased out due to performance and regulatory shifts	Widely adopted for high-performance roadside traffic detection, especially in China and Europe, though its use faces regulatory restrictions in some regions like the US	A new, dedicated frequency band for roadside traffic radar in China, promoted for its high resolution and to avoid interference with vehicle radars
		

Detection Range



T24S, T24SC

250m



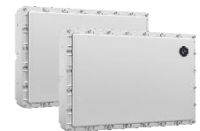
T80L, T80LC

350m



T24L, T24LC, U24

400m

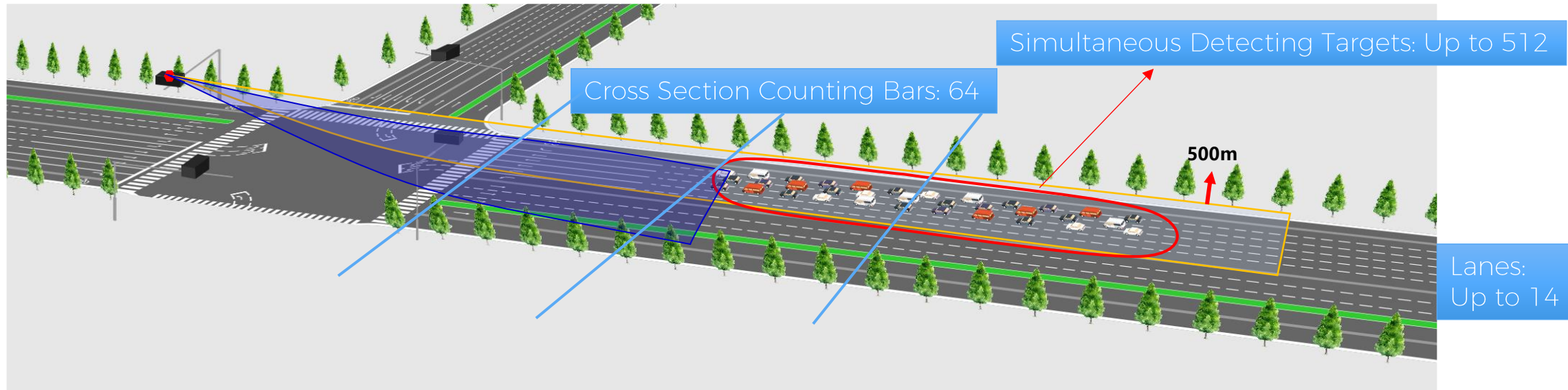


T24-700, T24-700C

700m

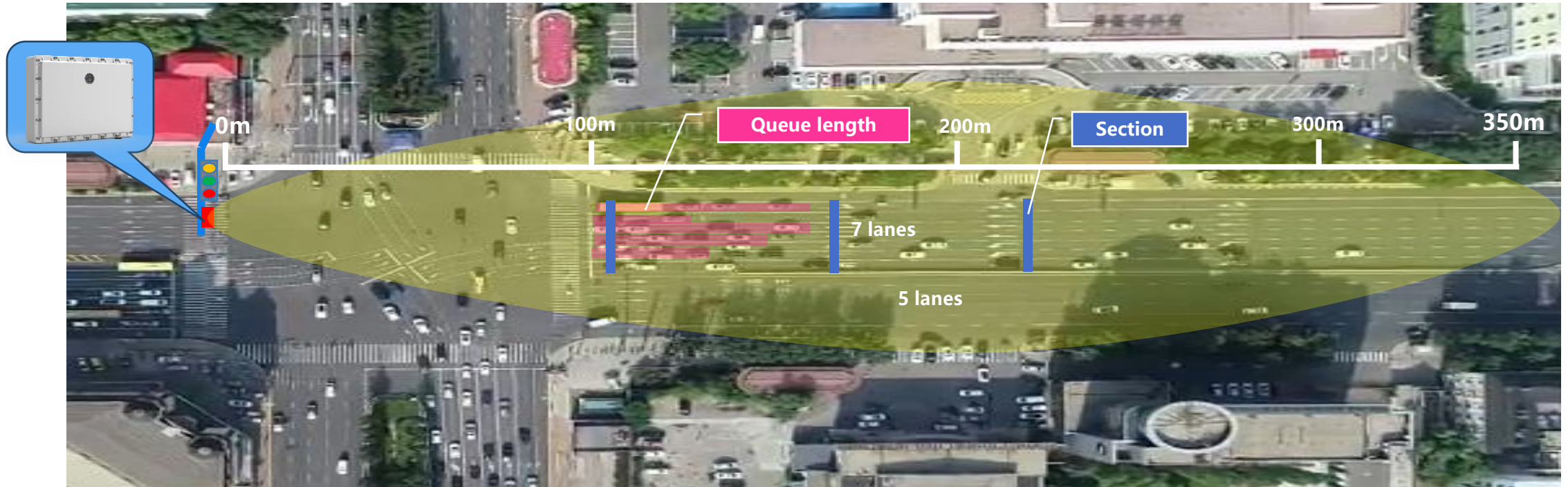


Lanes, Cross Sections, Targets



	T24L	T24S	T24LC	T24SC	T24-700	T24-700C	T80L	T80LC	U24
Lanes	12	12	12	12	14	14	8	8	2
Targets	256	128	256	128	512	512	256	256	128
Bars	64	64	64	64	64	64	64	64	64

ClairWav Core Values



All-weather high reliability

The radar can operate normally in any weather and lighting conditions, with a lifespan of 10 years.

Wide-range monitoring

The radar can simultaneously monitor ≥ 12 lanes at a maximum distance of ≥ 350 m.

Real-time accurate data

Scans and detects vehicles within the detection range at a speed of 10 to 20 times per second, providing various information such as traffic volume, queue length, average speed, and vehicle classification, with an accuracy rate of over 90%.

AI Real-time Traffic Signal Optimization System

✓ AI Signal Timing ✓ Real-time Control ✓ Regional Coordination

Dynamic Traffic Data Monitoring

Vehicle Passage Data

Traffic flow, speed, and queue length.

Road Operational Efficiency

Road condition assessment

- Evaluate road conditions
- Assess optimal phase settings and the limit of traffic efficiency
- Predict locations of road congestion

Intersection operational status monitoring

Traffic Incident Detection and Reporting

Single Point Analysis

- Single Intersection Control
 - Single Intersection Adaptive Control
 - Reverse Overflow Control
- Comprehensive Control of Multiple Intersections
 - Multi-Intersection Green Wave Control
 - Regional Traffic Flow Control

Regional Analysis

- Route Control
- Manual Control
- Special Operations Control

Real-time Emergency Event Response



Automatic Detection and Handling of Reverse Overflow.



Special Area Slow Entry Fast Exit Strategy.

Multidimensional Visualization of Traffic Data

Traffic Data Statistics

Section Flow, Average Vehicle Speed, Headway, Spacing Between Vehicles, Queue Length, Travel Trajectory, Vehicle Type

Traffic State Analysis

Leveraging real-time traffic data and GIS geographic information to create a digital twin holographic intersection, monitoring the city's traffic congestion in real-time.

Intersection Dynamic Information Display

Intelligent Highway Full-range Monitoring System

✓ Full Trajectory ✓ High-Precision Maps ✓ Event Monitoring ✓ Real-time Alerts

Basic Traffic Data Collection

Sectional Statistical Data

Traffic Volume, Average Speed, Headway, Virtual Loop Occupancy Time.

Lane Data

Queue Length, Lane Travel Speed.

Radar Observation Zone Data

Online Vehicle Count, Incoming Lane Travel Speed, Outgoing Lane Travel Speed.

Real-time Vehicle Data

(X, Y) Coordinates, Y-direction Velocity.

Operations and Maintenance Management

Traffic Incident Detection and Reporting

Abnormal Parking

Debris Detection

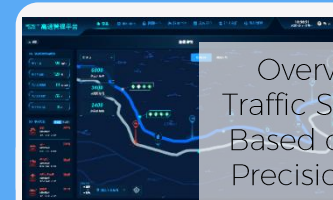
Queue, Overspeed, Wrong-Way Detection

Emergency Lane Occupation Detection

Congestion Detection

- Congested segment alert,
- High traffic flow segment notification,
- Anomalous confluence notification,
- Structured information archiving

Segment Traffic Situation Display



Overview of Traffic Situations Based on High-Precision Maps.



Key Sections, Key Observations



Display of Traffic Incident Details

Multidimensional Traffic Data Analysis

Single Point Analysis

Traffic Data Analysis
Section Operation Trend Analysis
Traffic Incident Analysis

Section Analysis

Traffic Data Analysis
Section Operation Trend Analysis
Traffic Incident Analysis

Multi-Section Joint Analysis

Combined Data Analysis
Combined Event Analysis

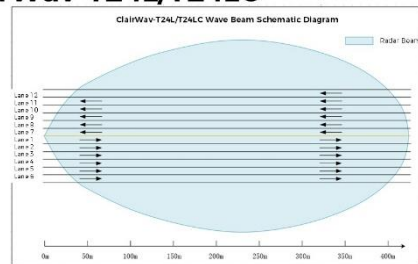


Figure 1 displays six screenshots from the TrafficFlow 2.0 application, organized into two rows and three columns:

- Top Left:** "Ranking of Congested Route Mileage" showing a horizontal bar chart with route numbers and corresponding mileage values.
- Top Middle:** "Intersection Traffic Flow Ranking" showing a vertical bar chart with intersection names and flow values.
- Top Right:** "Reverse Spillback Intersections" showing a table with intersection names and associated data.
- Bottom Left:** "Signal Importance Intersections" showing a table with intersection names and signal importance levels, indicated by traffic light icons.
- Bottom Middle:** "Number of Stops at Intersections" showing a vertical bar chart with intersection names and stop counts.
- Bottom Right:** "to e Time Ranking" showing a vertical bar chart with intersection names and time values.

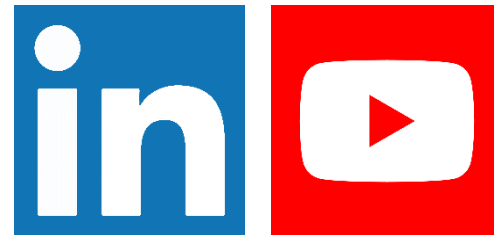
Qingdao Jiaozhou	Shandong, Heze	Jinan, Shandong	Linfen, Shanxi
Comprehensive Smart Sensing and Signal Control System	Signal optimization system, Green wave control and multi-intersection coordination	Signal optimization system deployed at key intersections	Cu Luo Roundabout
- Road Throughput Efficiency Improvements: 30% - Peak Intersection Vehicle Queue Length Reduction: 50% - Per Capita Annual Speed Based Time Saved: Hours - Crashes Annual Saved: Four - Construction: 1.66 million RMB - Citywide traffic volume approximately 320,000 vehicles/day	- Driving peak hours, the duration of congestion has decreased by 70.9% - leading to a traffic efficiency improvement of 40% or more	- Congestion and slow-moving traffic reduced by 64.3% - total reduction in delay congestion time: 754% - Total reduction in daily slow moving traffic time: 54.2% - Overall reduction in total duration of congestion: 50% - slow moving traffic throughout the day 150 minutes	- Reduction in evening peak congestion time: 40% minutes - Percentage reduction in evening peak congestion time: 47%

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[202507](#), [2025.08](#), [202509](#) [all previous issues...](#)



Thanks

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