



TraffiClair Monthly Updates

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Kevin Gu

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ClairGeo-M Wireless Magnetic Vehicle Detectors

Achieve Over 150,000 On-Site Installations



Onsite has successfully installed over 150,000 units of ClairGeo-M wireless magnetic vehicle detectors across various cities in China.

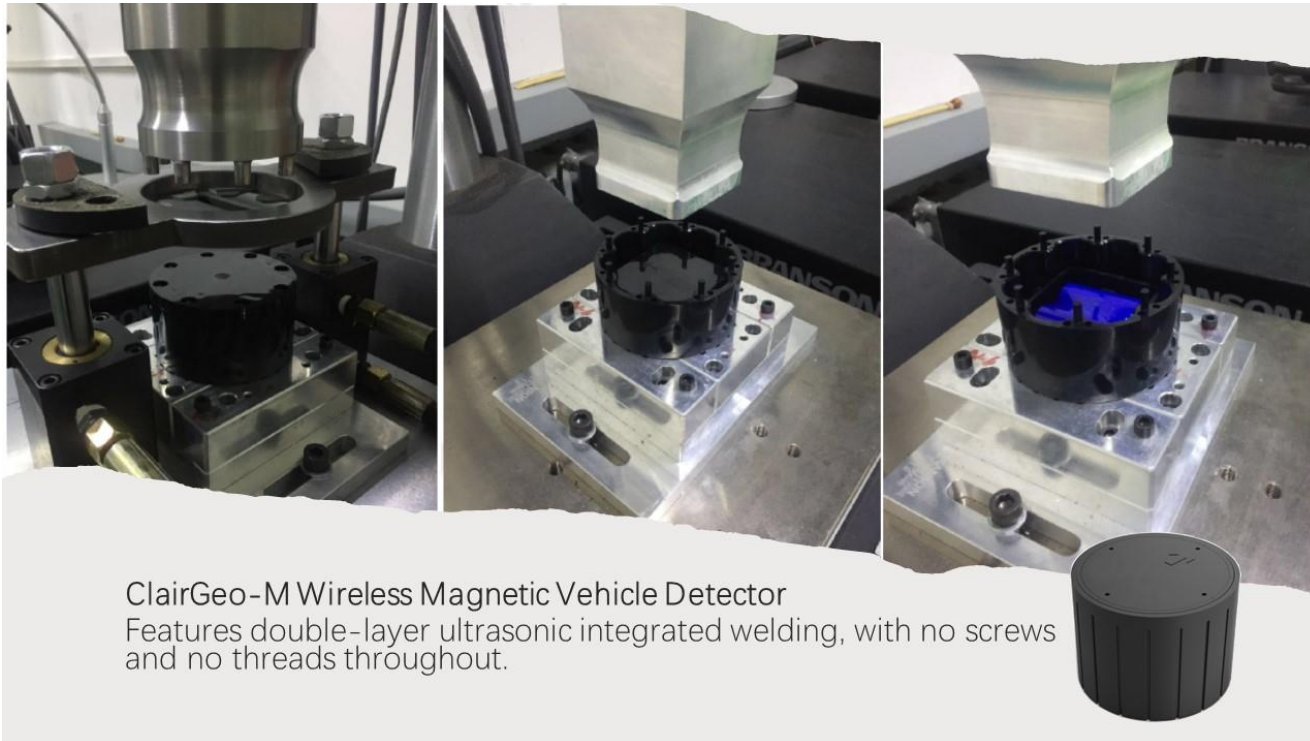
- In Xi'an, 1200 intersections are equipped with these sensors, providing traffic detection data and supporting various control systems like induction, overflow, and variable lane control.
- In Jinan, 700 intersections utilize these sensors for similar purposes, along with additional functions such as tunnel control, ramp control, and bus priority.
- ...

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ClairGeo-M Wireless Magnetic Vehicle Detectors

Screwless Integration and Ultrasonic Welding for Superior Waterproof Performance



ClairGeo-M Wireless Magnetic Vehicle Detector
Features double-layer ultrasonic integrated welding, with no screws and no threads throughout.

Our double-layer sealing system, featuring a screw-less integration and ultrasonic welding, ensures impeccable waterproofing. Crafted from advanced materials, it offers reliable protection, simplified user experience, and robust durability, making it an ideal choice for applications requiring uncompromised waterproof assurance. In the event of prolonged water accumulation on the road after rain or snow and the water pressure applied by tires passing over the detector, the geomagnetic detector can still operate stably for a long time.

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ClairGeo-M Wireless Magnetic Vehicle Detectors

Anti-interference Capability of ClairGeo-M Wireless Magnetic Vehicle Detectors

ClairGeo

Anti-interference Capability

- Direct Sequence Spread Spectrum (DSSS) to suppress in-band interference
- Effective suppression of 100% of out-of-band interference
- Dual-channel communication technology
- System networking technology



The primary sources of electromagnetic interference at the site of geomagnetic detector usage include urban public wireless Wi-Fi signals, 2G, 3G, and 4G wireless communication networks, GPS, and IoT devices. To counter these interference sources, ClairGeo-M employs the following four technical measures to achieve an optimal anti-interference solution:

- Direct Sequence Spread Spectrum (DSSS) to suppress in-band interference
- Effective suppression of 100% of out-of-band interference
- Dual-channel communication technology
- System networking technology

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ClairGeo-M Wireless Magnetic Vehicle Detectors

ClairGeo-M Wireless Magnetic Vehicle Detectors Achieve 99% Traffic Data Accuracy



TraffiClair is proud to announce that its ClairGeo-M Wireless Magnetic Vehicle Detectors have achieved an outstanding 99% traffic data accuracy. This high level of precision ensures that city planners and transportation authorities receive the most reliable and accurate traffic data available, revolutionizing traffic monitoring and management.

Reasons for High Accuracy:

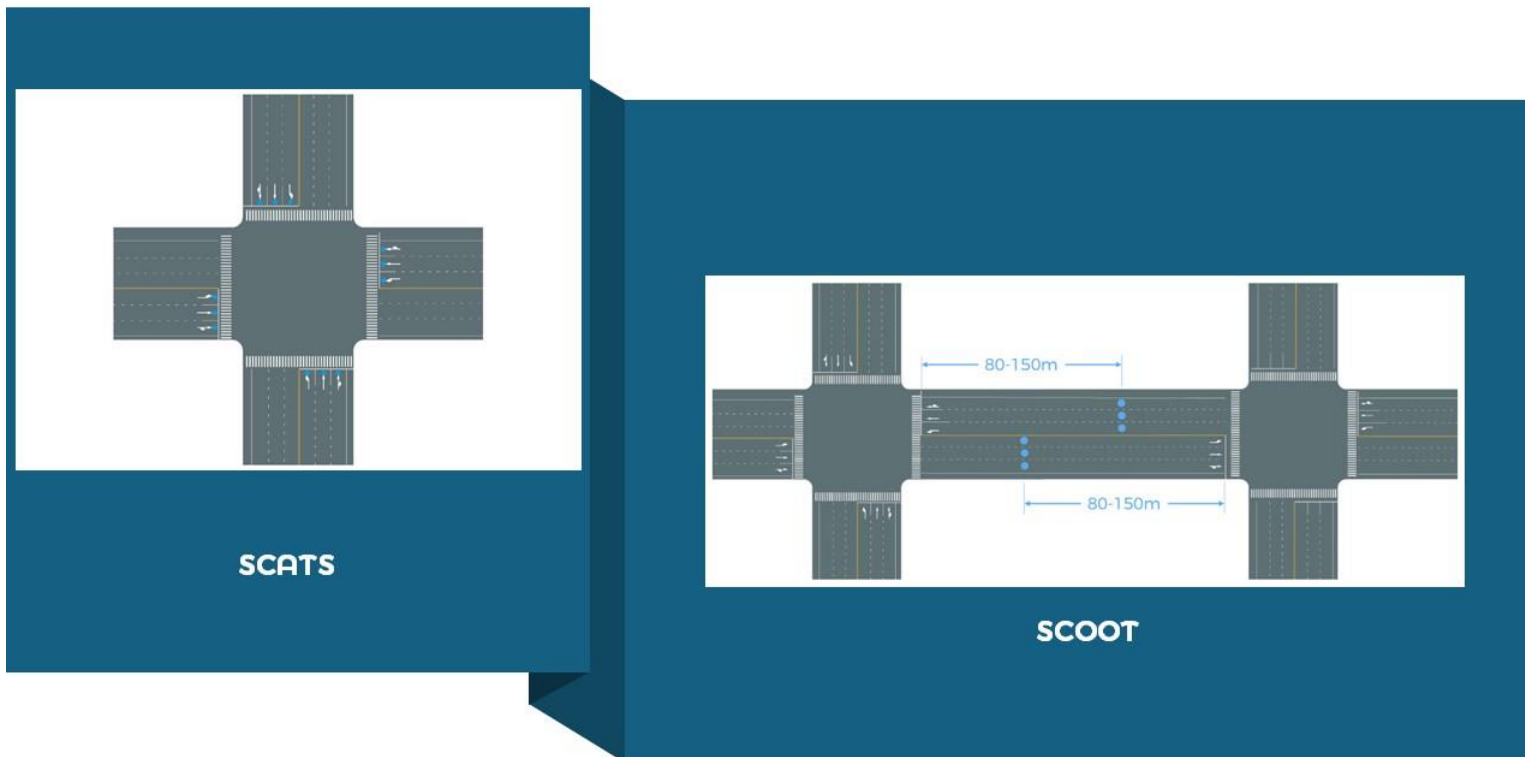
- Accurate Data Acquisition
- Accurate Data Transmission

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ClairGeo-M Wireless Magnetic Vehicle Detectors

ClairGeo-M Wireless Magnetic Vehicle Detectors perfectly match with SCATS/SCOOT Systems



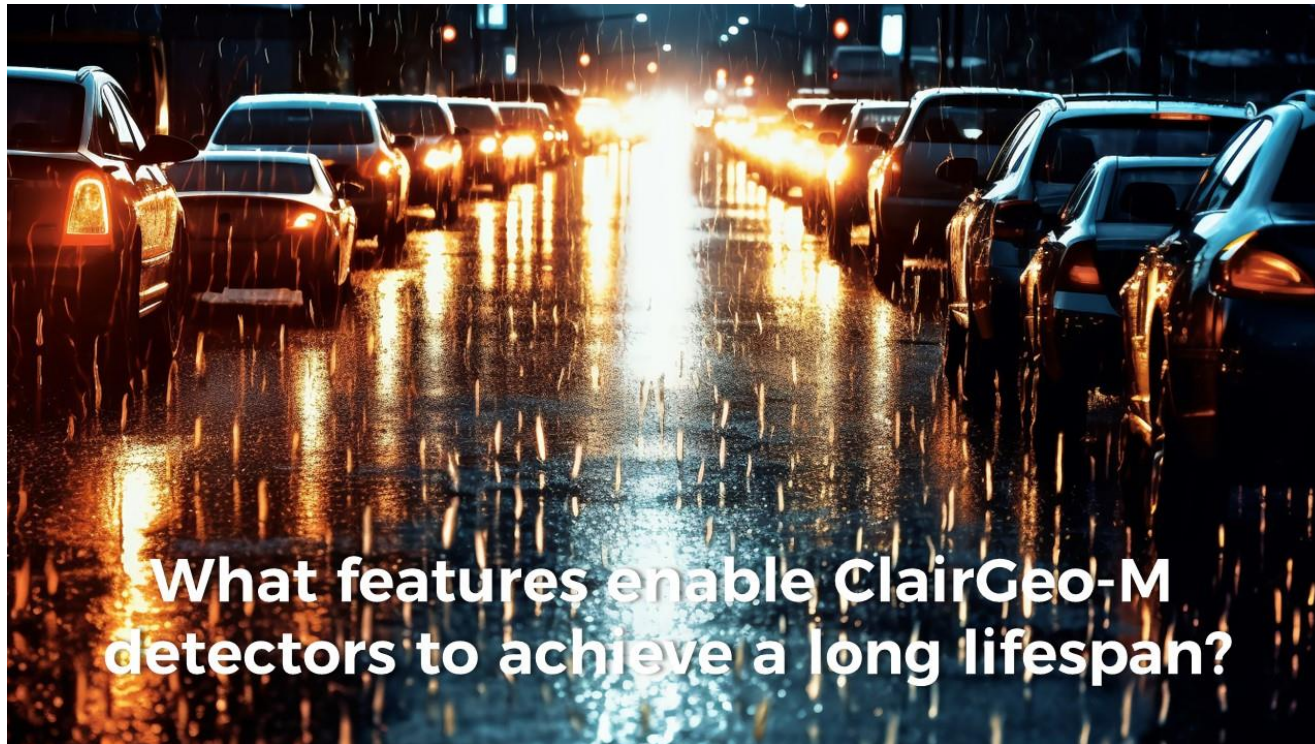
ClairGeo-M Wireless Magnetic Vehicle Detectors are well-suited for integration with both the SCATS and SCOOT traffic management systems, providing essential traffic data required for their respective optimization processes.

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ClairGeo-M Wireless Magnetic Vehicle Detectors

What features enable ClairGeo-M detectors to achieve a long lifespan?



The detector exhibits an extended lifespan through its design features. When there is no vehicle detection data, the communication module enters a sleep mode (i.e., low power mode). To distinguish between the absence of vehicles and a detector malfunction, communication with the upper end is maintained within a specified time frame, with a default value of 30 seconds, even in the absence of vehicle detection data.

The detector is designed with ultra-low power consumption IC and independently developed low power networking solution, utilizing long-lasting batteries and flexible settings.

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ClairWav Microwave Radar Family

ClairWav Radar Family Overview

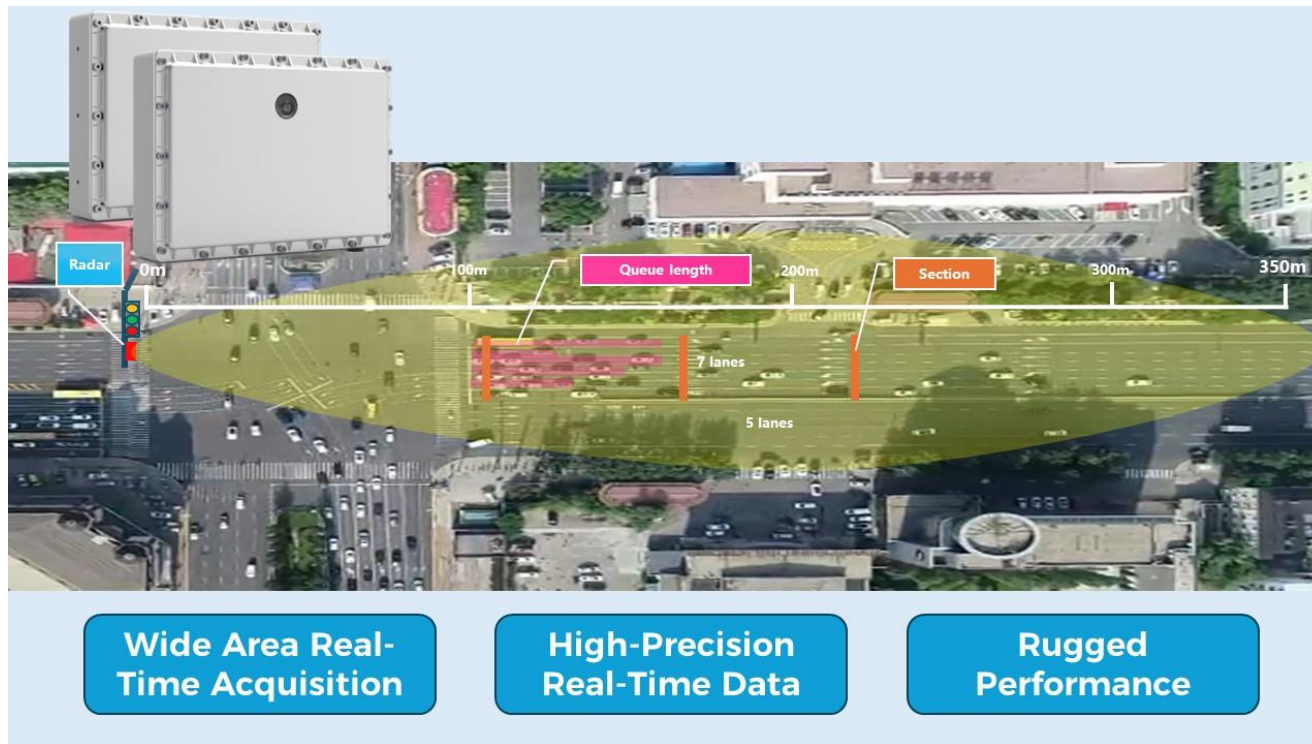
T24L	T24S	T24LC	T24SC	T80L	T80LC	U24
24GHz	24GHz	24GHz	24GHz	80GHz	80GHz	24GHz
Traffic Control	Traffic Control	Traffic Control	Traffic Control	Traffic Control	Traffic Control	Tunnel
						
Vehicle detection distance up to 400m	Vehicle detection distance up to 250m	Vehicle detection distance up to 400m, integrated with a 5M video camera	Vehicle detection distance up to 250m, integrated with a 5M video camera	Vehicle detection distance up to 350m	Vehicle detection distance up to 350m, integrated with a 5M video camera	Vehicle detection distance up to 400m
12 lanes 256 targets	12 lanes 128 targets	12 lanes 256 targets	12 lanes 128 targets	8 lanes 256 targets	8 lanes 256 targets	2 lanes 128 targets

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ClairWav Microwave Radar Family

Key Features of the ClairWav Microwave Radar Family



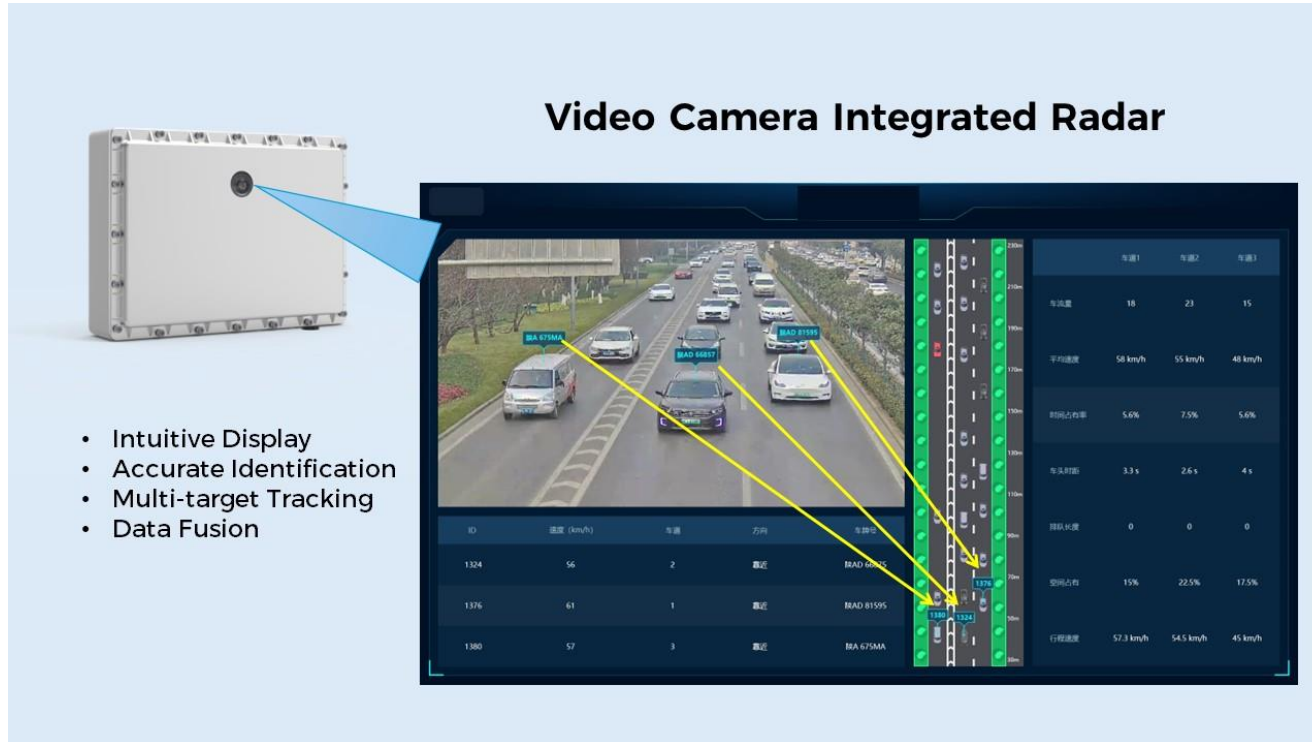
- Wide Area Real-Time Acquisition
 - Long Range Sensing: Capable of ultra-long monitoring distances, ranging from 250 to 400 meters.
 - ...
- High-Precision Real-Time Data
 - Rapid Scanning: Scans and detects vehicles within the detection range at a speed of 10 to 20 times per second.
 - ...
- Rugged Performance
 - Stable Application: Features independent IP and customizable design options to meet specific requirements.
 - ...

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ClairWav Microwave Radar Family

Integrated Radar and Video Camera: Data Fusion for Enhanced Detection and Visualization



Phased array radar is an advanced radar technology widely used in traffic applications. By using electronically scanned array antennas, it achieves rapid and flexible beam control, allowing simultaneous tracking of multiple targets and enhancing the radar system's detection and tracking capabilities. Combining this with video technology provides more intuitive visualization, making target identification and tracking more accurate and straightforward.

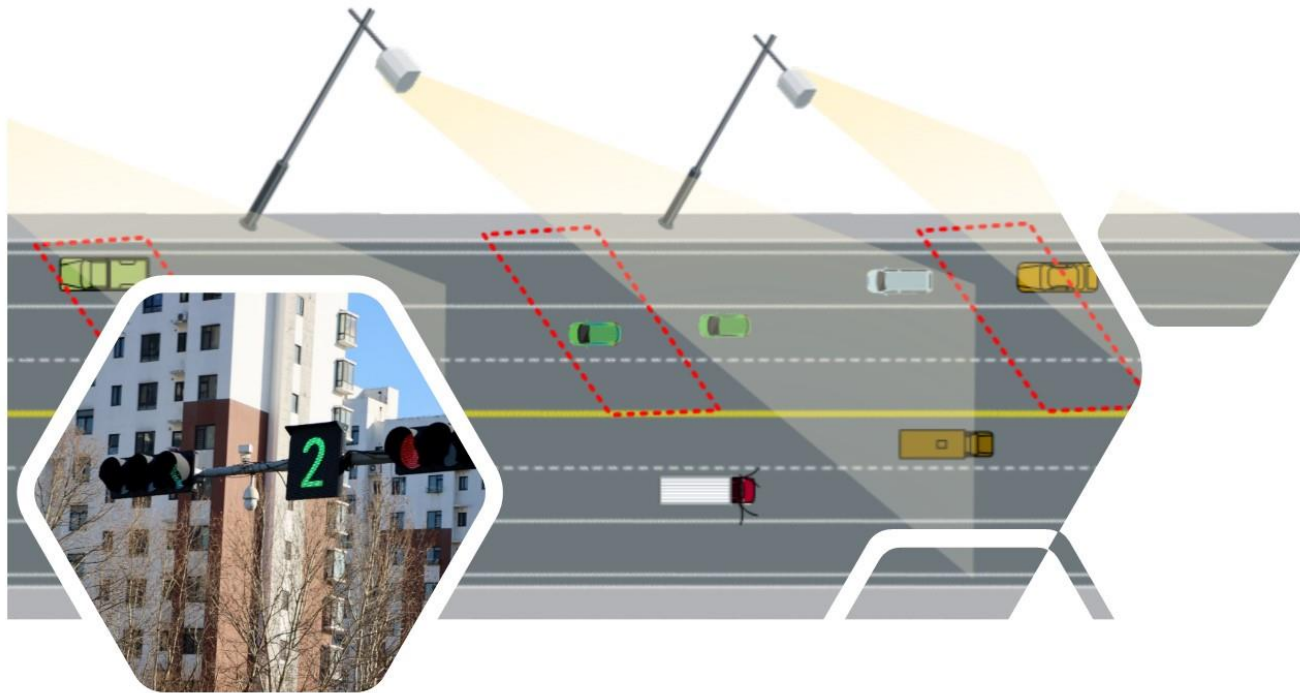
- Advantages of Combining with Video
 - ...
- Vehicle Characterization Information Collection
 - ...

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ClairWav Microwave Radar Family

Leveraging Radar Technology for Enhanced Traffic Data Collection



Radar technology is transforming how road traffic information is collected and analyzed, providing real-time and accurate data on traffic volume, vehicle speed, headway time, occupancy rates, and more. This precision in data collection enables traffic authorities to monitor road conditions effectively.

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ClairWav Microwave Radar Family

How Radar Technology Enhances Expressway Sensing



Radar technology is highly effective for expressway sensing, offering precise and comprehensive solutions. It can control traffic signals at expressway ramps, optimizing traffic flow and reducing congestion. The technology provides full monitoring of the mainline, ensuring real-time data collection and analysis. It is particularly useful at merging points, where it can detect and warn about potential hazards, improving safety. Radar systems can gather detailed data on various aspects such as congestion levels, wrong-way driving incidents, slow traffic, abnormal parking, illegal lane changes, pedestrian intrusions, and more. They can accurately track vehicle attributes, including location, speed, and trajectory, as well as identify speeding violations and road obstacles, providing valuable information for traffic management and safety.

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ClairWav Microwave Radar Family

Microwave radar in V2X (Vehicle-to-Everything) applications offers numerous advantages



👉 Comprehensive Traffic Information Sensing: High-precision, multi-source fusion traffic flow parameter information (target attributes, real-time location, real-time speed, trajectory, regional status, etc.)

👉 Abnormal Event Detection and Warning: Over-speeding/under-speeding, parking, wrong-way driving, lane changes, congestion, foreign objects, intrusions, etc.

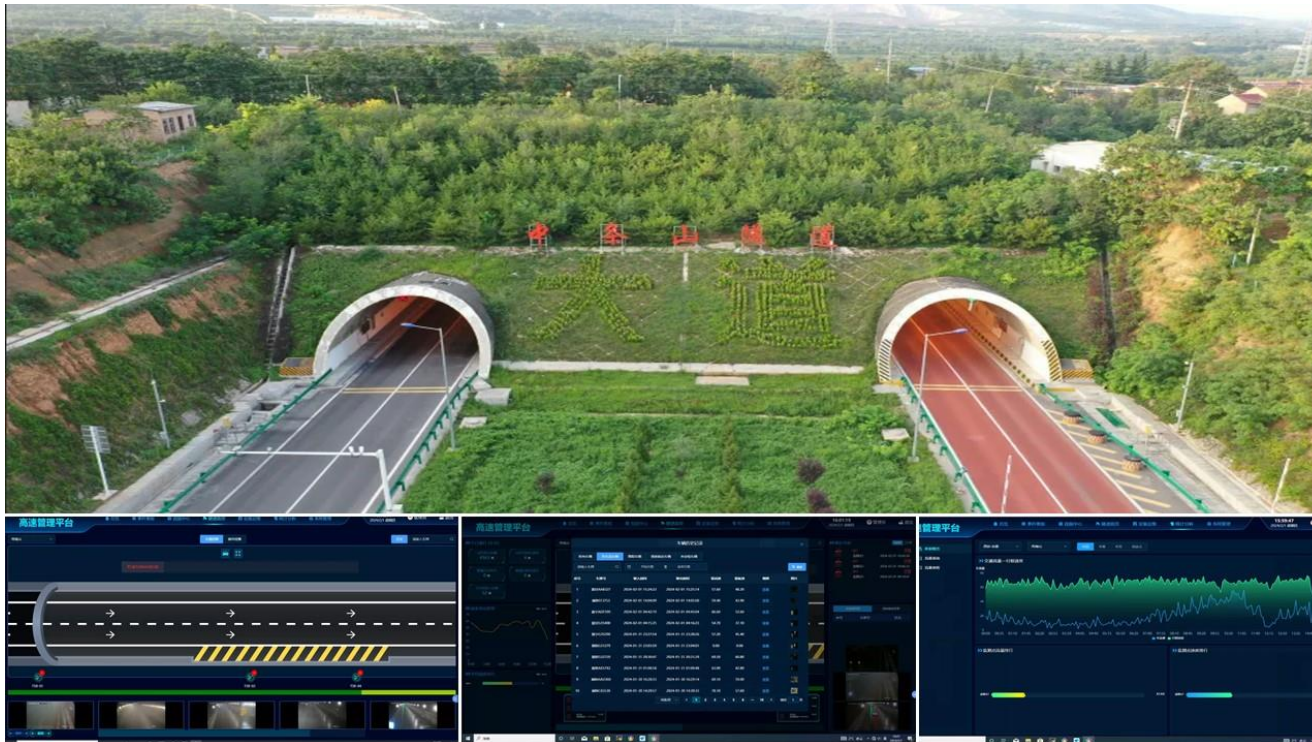
👉 Vehicle Behavior Analysis: Tracking vehicle trajectories, monitoring illegal lane changes, vehicle chases, and other behaviors

👉 Data Collection: Target type (small vehicle, medium vehicle, large vehicle), target speed, real-time location, real-time speed, trajectory, etc.:

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ClairWav Microwave Radar Family

Microwave radar is an excellent choice for tunnel applications



- ★ Real-time monitoring of tunnel events and proactive warning systems.
- ★ Tracking special vehicles in tunnels, including passenger and hazardous goods vehicles.
- ★ Integrated management of smart tunnels.
- ★ Monitoring tunnel passage status, real-time vehicle trajectories, sectional data, area data, lane data, and incidents.

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Product Phase-out Announcement

Following products will be phased out in next 3 months.

- **ClairWav-T77**, can be fully covered by ClairWav-T80 while 77-81GHz are in same frequency band.
- **ClairWav-P60**. If you have project preparing with this model, please inform us. We will prepare limited stock units accordingly or provide new model for substitution.
- **ClairWav-E24**. If you have project preparing with this model, please inform us. We will prepare limited stock units accordingly or provide new model for substitution.

Join the journey towards the future of mobility.

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Thanks

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