



**MILLIMETER RADAR SENSING**

◦ ◦ ◦ —————

**SMART TRAFFIC**

**MANAGEMENT SOLUTION**

**Yteq Sense Technology Co., Ltd.**

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SOLUTION

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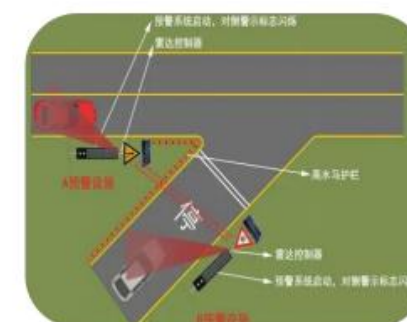
# Solution--Smart Highway Traffic Management

The system takes millimeter wave radar, check-point ANPR camera and video-fusion-data technology to accurately obtain all elements of vehicle information. After processing by roadside edge ai box, the front-end data then is connected to the central software. The central software manages to achieve intelligent traffic management, shifting from manual and passive control to intelligent and active control, supporting multi scenario applications such as traffic operation monitoring, event quick detection linkage, and congestion warning. The system is able to improve the traffic efficiency, ensure the safety of vehicle traffic under adverse weather conditions, shorten the response time to emergencies, and maximize the efficiency of transportation infrastructure.



Front-end Detection Sensors:

- 1200m Traffic Flow Radar (12Lanes)
- Check-point ANPR Camera (License Plate Recognition)
- PTZ Camera (Event Focus Recording)
- Edge AI Box ( Radar & Video Data Fusion)





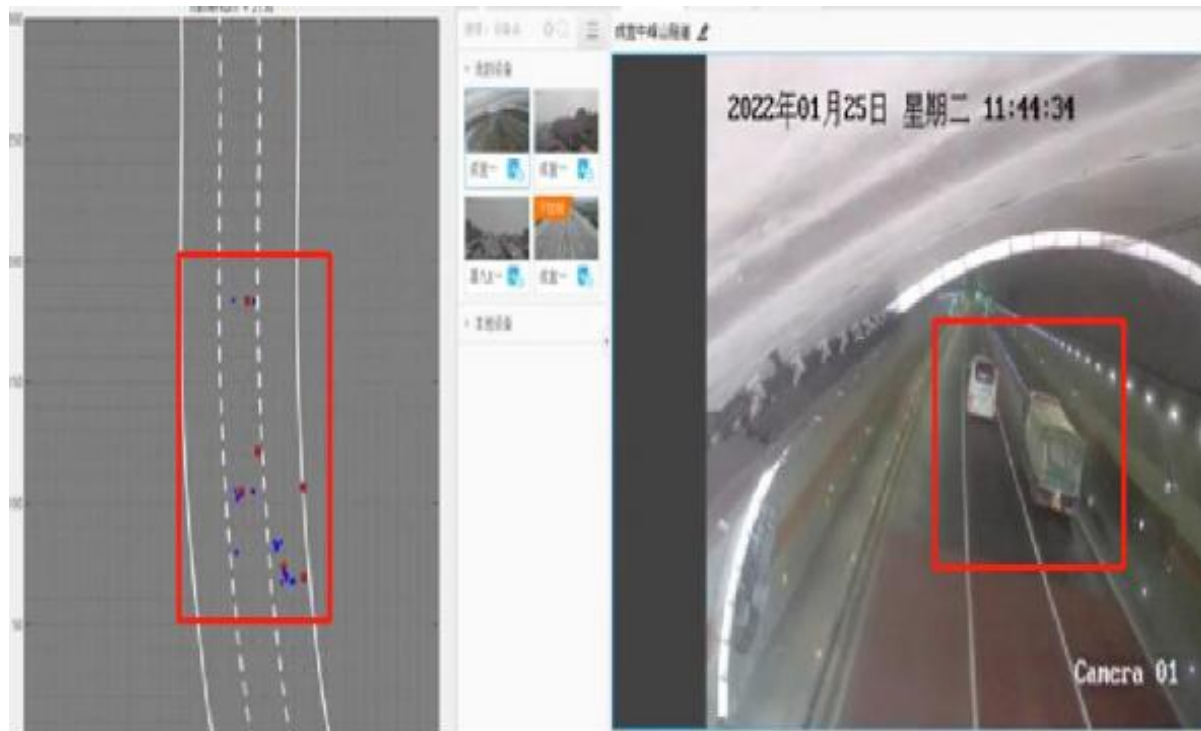
# Solution——Smart Tunnel Traffic Management

The system is putting millimeter wave radar as its core to accurately detect various events such as traffic accidents, vehicle failures, etc. at all-weather conditions. Meanwhile, the system can achieve all-weather trajectory restoration, accurately record the driving trajectory of vehicles in tunnels, and provide detailed basis for accident analysis. In terms of traffic monitoring and analysis, by continuously tracking and counting vehicles within the monitoring area, key data such as traffic flow, vehicle speed, and lane occupancy are collected in real-time to provide support for traffic management decisions. In addition, the tunnel lighting system can be intelligently controlled based on real-time traffic conditions, achieving the goals of energy conservation and ensuring driving safety, and comprehensively improving the operational management level and safety of the tunnel.



# Solution——Smart Tunnel Traffic Management

The tunnel is a special enclosed space structure. The radio wave will reflect multiple times through the tunnel wall, road surface, and top to form multiple transmission paths, causing the echo signal of the same target to reach the radar, resulting in unstable target trajectories, false targets, and other issues. Moreover, the complex dynamic reflection environment generated by vehicle movement in tunnels, as well as the differences in signal reflection characteristics of tunnel walls made of different materials, further exacerbate the complexity of multipath effects, seriously affecting the accuracy and reliability of millimeter wave radar monitoring, increasing the difficulty of target recognition and data processing, and becoming a key obstacle to achieving high-precision tunnel monitoring.



Traditional Millimeter Radar Detection



Yteq Sense Radar Detection

# Solution——Smart Tunnel Traffic Management

**车型统计**

小客车	大客车	货车	危化车
4232	686	1872	10
35	0	10	0

**隧道通行能力**

隧道名称	长度	实时流速	拥堵情况
梧木山隧道	6147m	57km/h	基本通畅

**设备监测**

6 / 42 照明灯	1 / 1 信号灯	27 / 100 车道指示器
13 / 72 风机	18 / 64 紧急电话	2 / 2 广播
91 / 247 火灾消防	67 / 102 视频监控	3 / 14 情报板
3 / 9 水位水泵	0 / 0 诱导灯	10 / 33 其他

**事件预警**

- [通讯故障-梧木山隧道固定摄像机(枪式) 隧道 K24+400 网络故障] 2024-07-18 10:57:58
- [通讯故障-梧木山隧道洞口TV固定摄像机(枪式)2] 梧木山隧道 K18+100 网络故障 2024-07-18 10:57:51
- [通讯故障-梧木山隧道洞内摄像机(右洞) 31] 梧木山隧道 K21+953 网络故障

**在途重点车辆**

驶入时间	驶出时间	车牌	车型	车速
当前暂无数据				

**环境监测**

隧道名称	能见度	一氧化碳	水位	风速	照度
蕉湾隧道	-	-	-	-	-
梧木山隧道	0.18(1/m)	0.77ppm	-	-	-
跑马坪1号隧道	0.75(1/m)	15.00ppm	-	-	-
罗水田隧道	2.81(1/m)	13.13ppm	0.88m/s	812.50lux	-

**Track**

**Event**

**Backup**

**Proof**

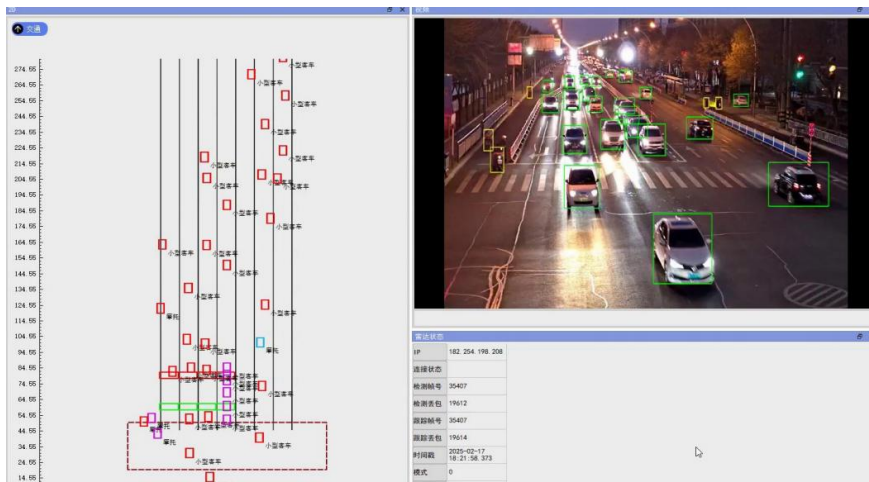
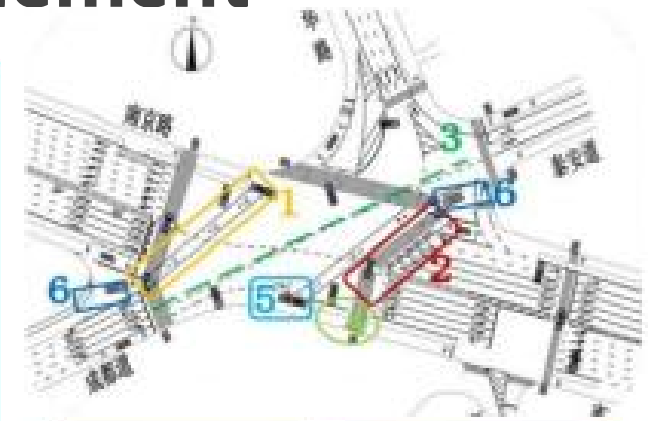
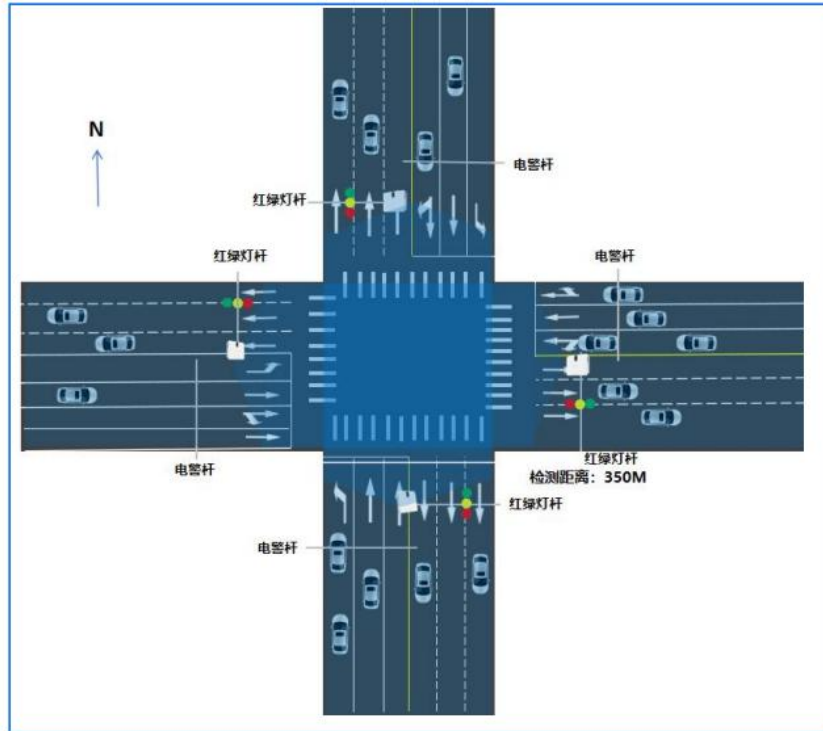
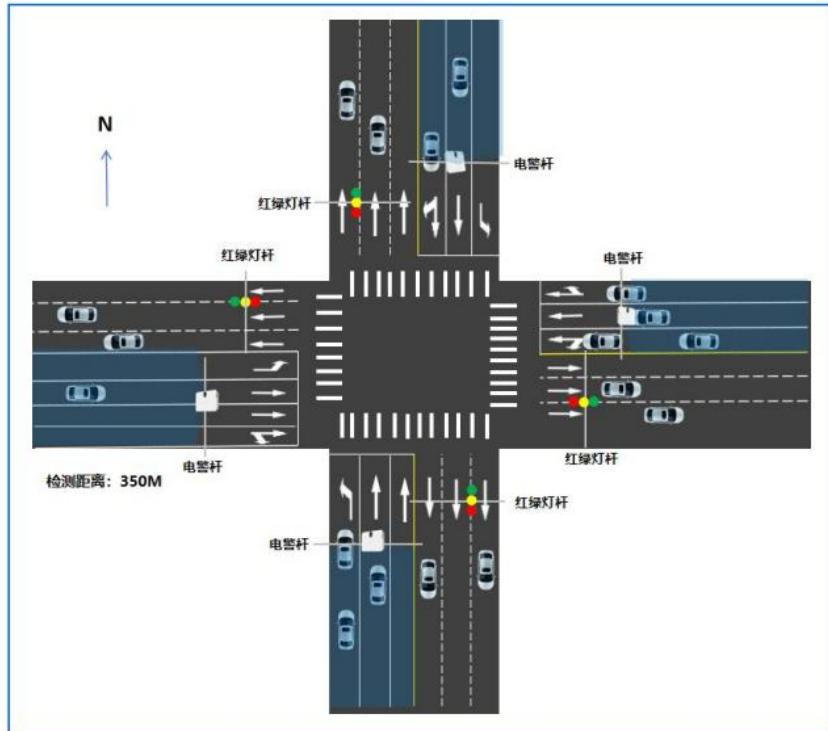
**Emergency**

# Solution——Smart Traffic Intersection Management

A new generation of intersection control based on multi-sensing fusion and intelligent algorithm is on the way to implementation. Through the millimeter wave radar, video camera and other sensors, combined with edge AI algorithm, it realizes the dynamic monitoring of all elements at all time including pedestrian, vehicles, roads, and events at the intersection. Accurately obtaining data on intersection traffic flow, queue length, vehicle speed, etc., then dynamically adjusting signal timing, and achieving a transition from traditional timed signal control to dynamic and intelligent control can effectively improve intersection traffic efficiency, and reduce traffic congestion, and enhance the traffic safety.



# Solution——Smart Traffic Intersection Management





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PRODUCTS

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# Product—Traffic Speed & Flow Radar

## Introduction

Traffic flow radar is developed to help to optimize the traffic control management and improve the transportation safety. By microwave monitoring and AI algorithm, the radar detection is featured high accuracy and reliability. It can monitor vehicle flow in real time to report the ID, distance, lane, speed and other information periodically. So it can be applied to detect the vehicle queue at crossroads and count the traffic flow. With integration to ANPR camera, it can be applied to monitor the highway and downtown intersection, lower down the traffic violation and improve the traffic efficiency.

## Scenarios



TFRE350



TFRE600&TFRE1200



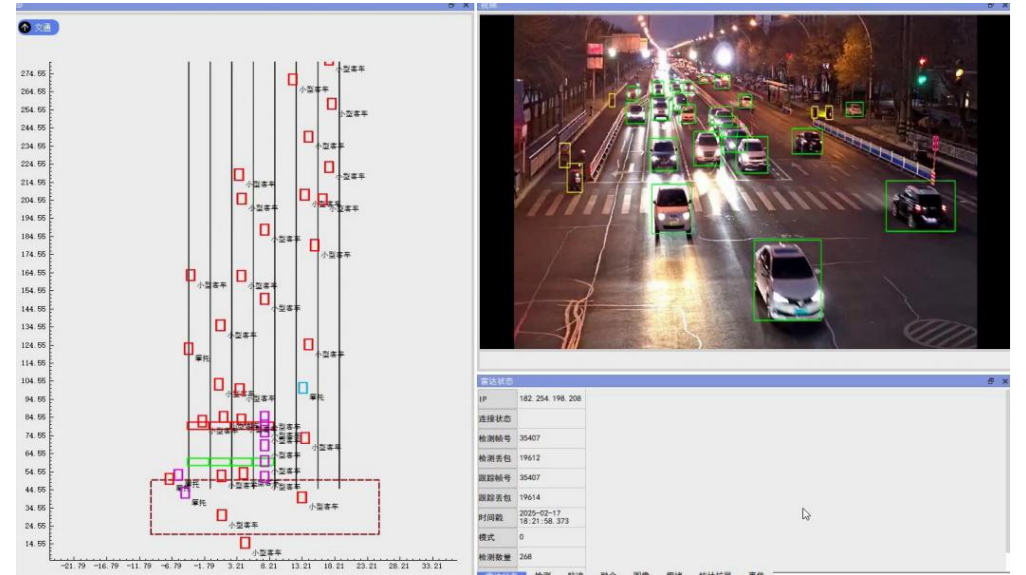
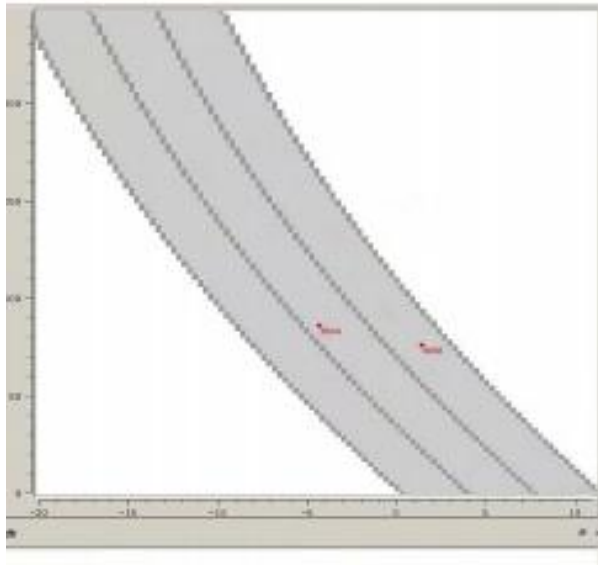
# Product—Camera Integrated Radar



AIRE200T & AIRE350

## Introduction

The camera integrated radar adopts fusion sensing technology, deeply integrating the sensing advantages of millimeter-wave radar and camera video. This radar enables real-time monitoring of vehicles and pedestrians on roads within a designated area. It can simultaneously track the movement trajectories of multiple targets and output information such as target location, speed, and types. It supports applications such as traffic flow statistics, traffic incident detection, and driving behavior monitoring. It is suitable for target detection in scenarios such as urban expressways, intersections, and V2X systems.



# Product——Traffic Edge AI Box 8CH/4CH



TEAB-8



TEAB-4

## Introduction

The traffic edge ai box is developed to integrate data from millimeter wave radar and video camera, deeply integrating the detection data and output fusion targets. The radar delivers real-time monitoring of vehicles and pedestrians on roads within a designated area. ANPR camera or PTZ camera can be connected to this traffic edge ai box. Through data fusion and ai algorithm, the movement trajectories of multiple targets and information such as target location, speed, and types can be given.



# Product—Traffic Speed Radar Law Enforcement



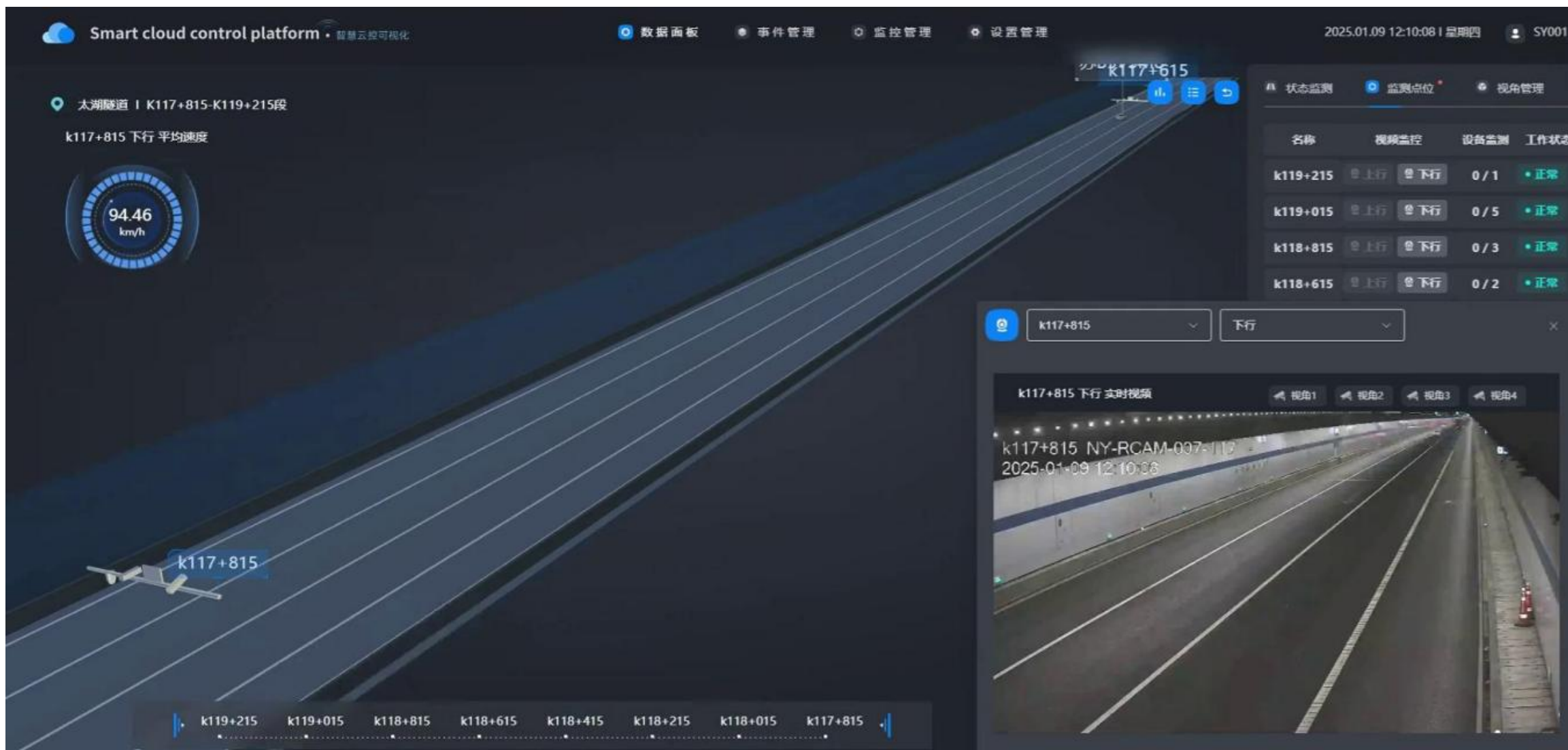
TSRK04-LE

## Introduction

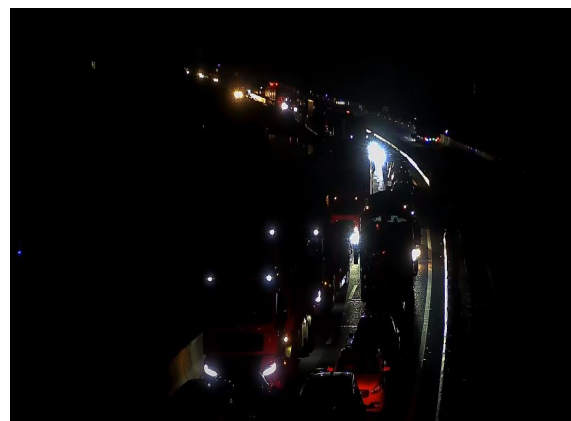
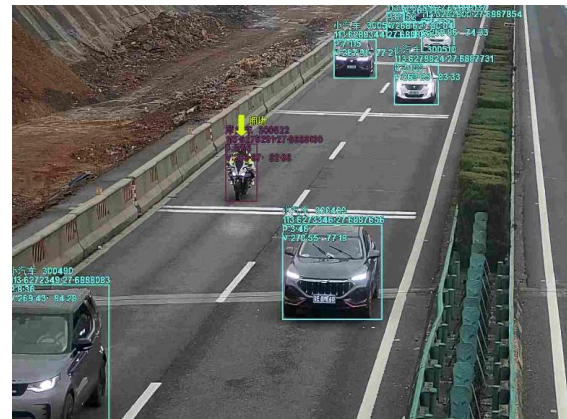
Multi-lane speed radar is developed to monitor multiple lanes and multiple targets on the road. It is always preferred to install the radar at a distance of 15-60 meters from the vehicle detection point on gantry or L-shape pole to cover up to 4 lanes of vehicles at the same time. It can send a trigger signal to the camera at detection point and record the vehicle speed and the vehicle driving lane. The speed detection meets the international requirements for enforcement.



# Product—Traffic Safety Management Software Platform



# Scenario——Traffic Project Case References



2广河 广州方向  
K988+950  
路面监控  
(沙湾-永汉)  
2020年04月25日 09:

# Scenario——Traffic Project Case References



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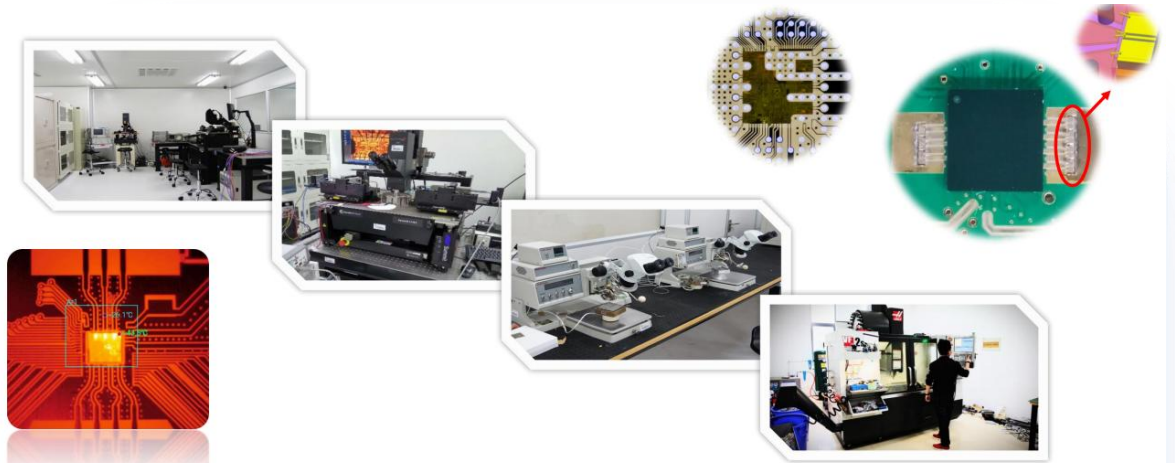
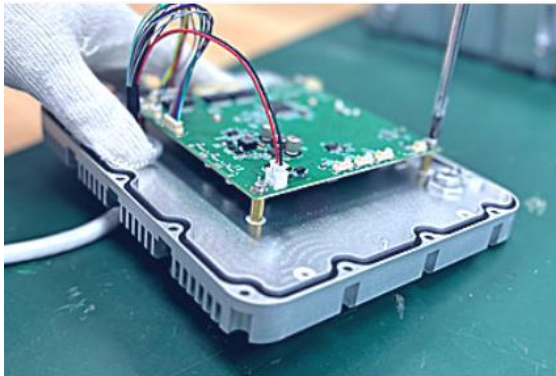
COMPANY

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# Company--Yteq Sense Technology

## Smart Radar Sense for Traffic Safety

R&D--Manufacturing--Integration--Solution Providing



Founded by a group of senior traffic experts, Yteq Sense Technology Co., Ltd. is a hi-tech enterprise specializing in traffic sensing radar system development and serving traffic & road safety. Yteq has got a professional team in R&D development, including radar antenna design, hardware design, AI & algorithm development and software integration. Yteq will continue to grow and bring better products and service to the traffic safety market.

# Our Honor

## Hi-Tech Enterprise



## Copyrights



## Invention Patent



## Prize



## System Certificate



R&D • Invention • Cost-Down



IP Patent  
7



Certificate  
10+



Copyright  
20+

# Our Honor

