

HUQOYS

RTE V49-V

500m 4D Imaging Radar-Vision Radar



MIMO radar front-end technology



Wide area multi-target detection

12 lanes horizontally,
500 meters vertically,
512 objects tracking detection

FMCW waveform design



Holographic multi-dimensional perception

Accurately locate vehicle trajectory information,
Multi-section + regional information perception

Vehicle **trajectory tracking** algorithm



Multi-sensor fusion Multi-target radar

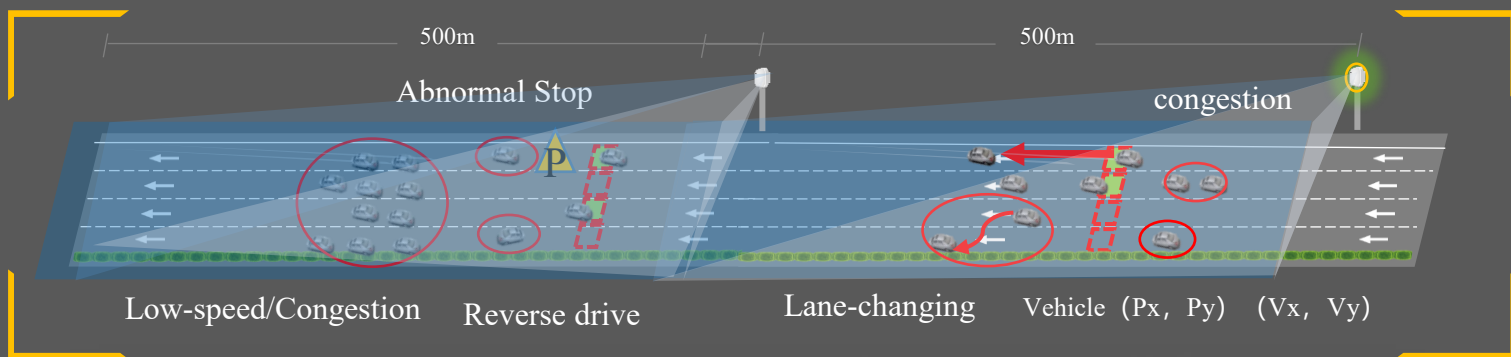
tracking, video forensics,
Coordinate matching and data fusion

Radar-Video **Fusion Detection** Algorithm



High-precision, all-weather suitability

High-precision all-weather data collection,
Not affected by weather and light



Technical Specification

Basic Parameters

Detection range	30m ~ 500m
Range accuracy	0.2m
Range Separation	0.3m
Coverage	12 lanes
Simultaneous detection	Up to 512 objects
Refresh time	50ms
Interval of velocity	-200km/h ~ 200km/h
Speed accuracy	±0.1m/s
Speed Separation	≤0.25m/s
Operating frequency	77GHz
Classification	Large vehicles, small vehicles, non-motor vehicles, and pedestrians
Statistical data	vehicle volume, average speed, time occupancy rate, Time headway, 85th percentile speed
Incident data	abnormal stop, high-speed, illegal lane-changing, reverse drive, congestion, no-entry incident

Environmental Parameters

Working temperature	-40°C~+70°C	Humidity	0~95%
Installation height	6 ~ 12m	IP rating	IP67

Video

Resolution, Frame Rate	3840 x 2160 px, up to 25 fps	Video Codec	H.265, H.264, MJPEG
Video FOV	±13°	Lens	12mm fixed focus lens
Sensor	1/2.5 inch CMOS		

General

Power supply	24V DC	Port	RJ45
Power consumption	≤ 30W	MTBF	100000h
Weight and dimension	3200g, 252×200×78mm	Material	PC

