

TCM873 Traffic Flow Radar



TCM873 is an 80GHz traffic flow statistical millimeter wave radar independently developed by Nanoradar Technology Co., Ltd. The radar adopts a dual-beam design, has a stable detection range of 500m, can identify large, medium and small vehicles, non-motorized vehicles and pedestrian targets, supports the detection of 512 targets, and outputs real-time information such as distance, speed, azimuth angle and status of the targets, with compact size, high sensitivity, stable performance, light weight and easy integration. It is widely used in high-speed traffic monitoring, intersection monitoring, roadside parking violation detection and other scenarios.



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Product characteristics

Accurate, effective and safe

- **Long-distance detection:** It can detect the vehicle target at a distance of 500m, realize the rapid identification of the vehicle type, and quickly identify the target vehicle lane.
- **Multi-target detection:** The radar supports synchronous output of up to 512 targets, giving the most accurate detection results in the shortest time.
- **Dual-beam detection:** it uses a number of advanced digital signal processing technologies such as FFT and target clustering tracking, with dual-beam coverage and a long beam width of 30 °, which can achieve long-distance detection; Short beam width 80 °, wide range, can cover 10 lanes

Work 24/7/365

- **All-weather:** All-weather real-time protection, adapt to rain, snow, fog, haze, sand and dust and other bad weather, to maximize the elimination of missed reports, eliminate false alarms
- **High protection level:** It can realize radar IP67 protection, high waterproof and dustproof level, shock resistance and shake resistance, and can work normally under various extreme environmental conditions.

More reliable and stable

- **Stable and reliable:** according to customer needs,

support network port, output a large amount of data, and more stable and reliable data transmission

- **Anti-interference:** 4-gear sensitivity can be adjusted in multiple gears to reduce the false alarm rate; Frequency error design can avoid interference between radars.

It supports the design of Rayvision all-in-one machine, space-time synchronization and deep integration.

- **Time synchronization:** PTP timing function is supported to ensure time synchronization between radar and camera.
- **Space synchronization:** GPS positioning function is supported, and the world coordinates of the radar can be imported into the high-precision map with one key, which is convenient for customers to carry out visual management of the equipment.

Virtual configuration: simulate the real scene, closer to the actual application

- **Channelization configuration:** set different number of lanes on the same road according to the real road scene
- **Configuration of green belt:** it can display the lane number of the green belt and filter the targets in the green belt
- **Live port configuration:** It can display the lane number of the green belt, filter the target in the green belt, and detect the vehicles that suddenly turn around during driving.



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Technical specifications

Measurement Performance General Objectives		
Modulation mode		FMCW
Ranging range		1.2~500m@0°
Range measurement resolution	Point target, non-tracking	1m
Distance measurement accuracy	Point target, non-tracking	0.5m
Azimuth beam		± 40 ° @ Wide Beam ± 15 ° @ Narrow Beam
Elevation beam		± 13 ° @ Wide Beam ± 5.5 ° @ narrow beam
Angular accuracy	Point target, non-tracking	0.6°
Speed range		-300km/H.. + 300km/H (+ means far from the target,-means close to the target)
Velocity resolution	Point target, non-tracking	0.05m/s
Speed accuracy	Point target, non-tracking	0.02m/s
Cycle period		About 80ms
Number of antenna channels		6TX/8RX = 48 channels
Operating conditions		
Radar transmitting frequency	Follow ETSI & FCC	80GHz
Transmission capacity	Average/Peak EIRP	29.8dBm
Power source		+9.0V...32VDC
Power consumption	At 12 V	12W
Operating		-40℃...+70℃



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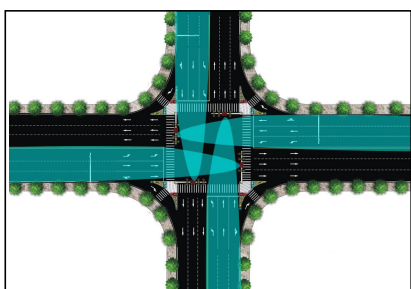
temperature		
Storage temperature		-40℃...+85℃
Degree of protection		IP67
Interface type		
Interface		RS485/Ethernet port
Structure		
Size	L * W (mm)	110*132
Weight	Harness is not included	/
Material	Enclosure Front/Rear Cover	/



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Application scenario

The product can be applied to traffic scenarios such as urban intersections, urban intersections, expressways, and Illegal parking monitoring, providing support for traffic management and road safety.



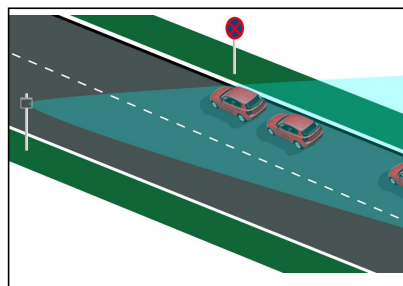
Urban Intersection Urban



Intersection/Road Section



Highway parking



Illegal parking monitoring

