CREATOR (CHINA) TECH CO., LTD.
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CRT-RV500-001

4D Automotive Millimeter Wave Radar

This 77GHz short-range 4D radar uses domestically developed chips to detect moving/static targets, outputting distance, speed, and angle data. Designed for low-speed (0–60 km/h) special vehicles (e.g., sanitation trucks, mining vehicles, agricultural machinery), it supports collision avoidance, blind-spot detection, and automation with MIMO technology, adaptive waveform adjustment, and multi-scenario adaptability.



Features

- **77GHz frequency:** All-weather operation with IP67 protection
- **Precision detection:** Tracks motion direction, distance, speed, and angles
- **Single-chip integration:** Cost-effective, low power consumption, high reliability



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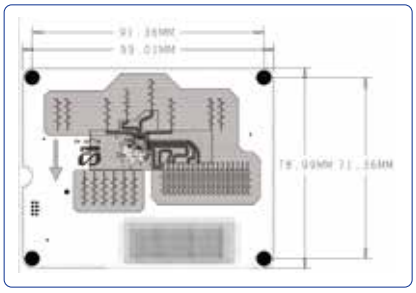
Technical Specifications

General Parameters		
Operating Frequency		76-77GHz
Operating Voltage		9-36V
Current Consumption		Idle: 100mA; Operating: 14mA; Peak: 200mA
Detection Range		40m@15dBsm
Communication Interface		CAN, RS485, TTL
Operating Environment		-40°C~85°C, 0 ~ 95 % RH (non-condensing)
Storage Environment		-40°C~105°C, 0 ~ 95 % RH (non-condensing)
Protection Rating(with housing)		IP67
RF Parameters		
Performance		**Short Range**
Distance(m)	Range	0.10 ~40m(120°)
	Accuracy	±0.05m
	Resolution	0.1m
Speed(km/h)	Range	-18m/s ~+18m/s
	Accuracy	±0.12m/s
	Resolution	0.25m/s
Horizontal FOV(°)	Range	±90
	Accuracy	0.4
	Resolution	6.04
Vertical FOV(°)	Range	±30.0
	Accuracy	2
	Resolution	30.0
Detection Targets		Dynamic & Static
Max Targets Tracked		200
Update Rate		10Hz
Frequency Range		76~77GHz

Diagram



Application

- Low-speed vehicle ADAS
- Obstacle avoidance for robots

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