RS-LiDAR-M1

Automotive Grade MEMS LiDAR

RS-LiDAR-M1 is an automotive grade solid-state LiDAR, that RoboSense specially designed for massive production vehicles. It provides highly reliable 3D environment perception for vehicles to deliver safe driving.

Based on RoboSense's revolutionary patented MEMS technology, M1 has much simplified structure and way less demands on components. This new revolutionary solid-state LiDAR system excels with a lot of advantages including high reliability, low cost, easy for massive production, and easy for integration into vehicle body, etc.

Product Advantages

- Automotive Grade
- 0.2°x0.2° Resolution
- 200m Measurement Distance
- Compact Size
- Solid-State LiDAR
- Low Power Consumption

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RoboSense LiDAR

www.robosense.ai

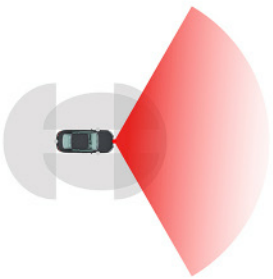
Sensor			
Version	RS-LiDAR-M1	Horizontal FoV	120°(-60.0° ~ +60.0°)
Laser Wavelength	905nm	Vertical FoV	25°(-12.5° ~ +12.5°)
Laser Safety	Class 1 eye safe	Horizontal Resolution	0.2°(Average)
Range[5]	200m(150m@10% NIST)	Vertical Resolution	0.2°(Average)
Blind Spot	≤0.5m	Frame Rate	10Hz
Range Accuracy (Typical)[2]	±3cm (1sigma)		

Output	
Points Per Second	750,000pts/s(Single Return Mode) 1,500,000pts/s(Dual Return mode)
Automotive Ethernet	1000M Base T1
Output	UDP packets over Ethernet
UDP Packet include	Spatial Coordinates, Intensity, Timestamp, etc.

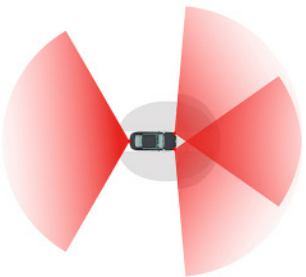
Mechanical / Electrical / Operational			
Operating Voltage	9V – 36V	Dimension(Without connector)	108mm(D)x110mm(W)x45mm(H)
Power Consumption[3]	15W	Operating Temperature[4]	-40°C ~ +85°C
Weight(without cabling)	~730g(without cable)	Storage Temperature	-40°C ~ +105°C
Time Synchronization	PTP	Ingress Protection	IP67、IP6K9K

Deployment Recommendations

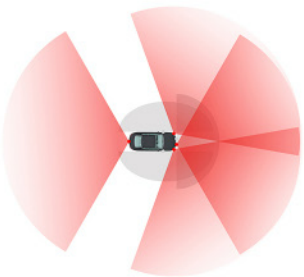
■ RS-LiDAR-M1 ■ Blind Spot LiDAR



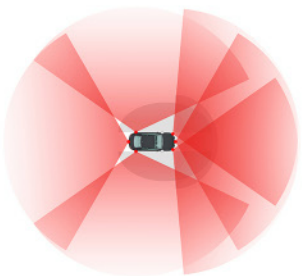
For L2+/L3 Car



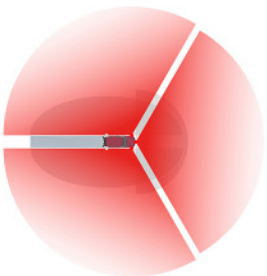
For L3/L4 Car



For L4 Robo-Taxi A



For L4 Robo-Taxi B



For L4 Robo-Truck

1 The following data is only for mass-produced products. Any samples, testing machines and other non-mass-produced versions may not be referred to this specification. If you have any questions, please contact RoboSense sales.
2 The measurement target of accuracy is a 50% NIST diffuse reflectance target, the test performance is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.
3 The power consumption is tested under 10Hz frame rate and within 100m. The result is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.
4 The operation temperature is depending on circumstance factors, not only sun load and air flow but also including other uncontrollable factors.
5 The range performance is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.