robosense

rsbpearl

360°× 90° Super Wide FOV, Short-range Blind Spot LiDAR

RS-Bpearl is a new type of short-range LiDAR designed specifically for the detection of blind spots. Loaded with RoboSense's innovative signal processing technology, RS-Bpearl is able to detect objects within a few centimeters, plus a 360°x 90° super wide field of view, RS-Bpearl can precisely identify obstacles around the vehicle surface,such as pets, children, roadbeds, etc.

RS-Bpearl's disruptive modular design dramatically reduces costs while making the product more flexible, compact and customizable.

Product Advantages

Blind Spot＜10cm

360°× 90°Super Wide FOV

-30℃ Cold-Resistant

「Unique FOV Designed for Near-Field Blind-Spots Detection」

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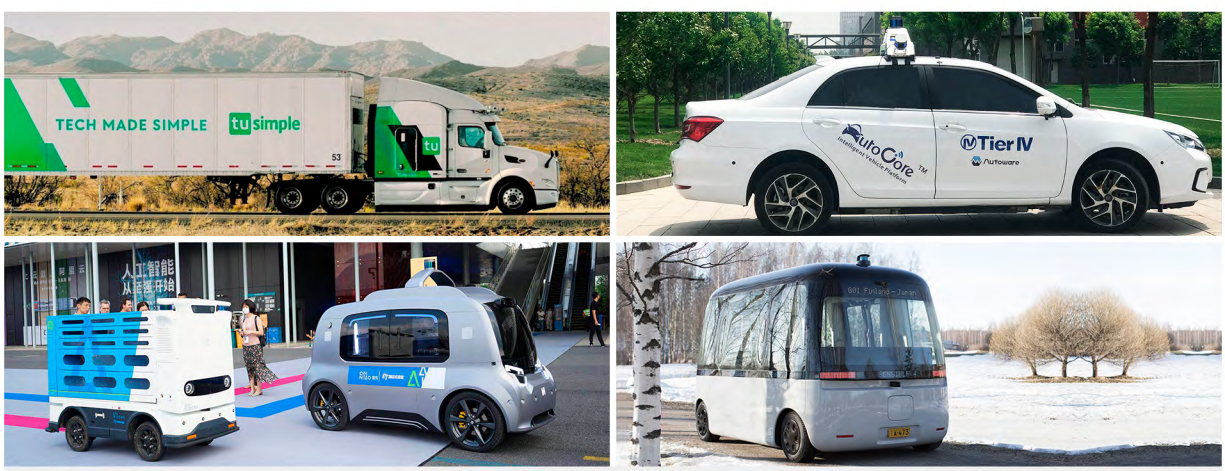
Sensor			
# of Lines	32	Horizontal FoV	360°
Laser Wavelength	905nm	Vertical FoV	90°
Laser Safety	Class 1 eye safe	Horizontal Resolution	0.2°/0.4°
Range[1]	100m (30m@10% NIST)	Vertical Resolution	2.81°
Blind Spot	≤0.1m	Frame Rate	10Hz/20Hz
Range Accuracy (Typical)[2]	Up to ±3cm	Rotation Speed	600/1200rpm (10/20Hz)

Output	
Points Per Second	576,000pts/s (Single Return Mode) 1,152,000pts/s (Dual Return Mode)
Ethernet Connection	100 Mbps
Output	UDP packets over Ethernet
UDP Packet include	Spatial Coordinates, Intensity, Timestamp, etc.

Mechanical / Electrical / Operational			
Operating Voltage	9V – 32V	Dimension	ϕ100mm * H111 mm
Power Consumption[3]	13W	Operating Temperature[4]	–30°C ~ +60°C
Weight(without cabling)	~0.92 kg	Storage Temperature	–40°C ~ +85°C
Time Synchronization	$GPRMC with 1PPS	Ingress Protection	IP67

Applications



Autonomous Driving

V2R

Robotics

Industrial

1 The range performance is depending on circumstance factors, not only temperature, range and target reflectivity but also including other uncontrollable factors.
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. 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.