



rs bpearl

360° x 90° Super Wide FOV, Short-Range Blind Spot LiDAR



RS-Bpearl is a new type of short-range LiDAR explicitly designed for the detection of blind spots. Loaded with RoboSense's innovative signal processing technology, RS-Bpearl can detect objects within a few centimeters. With the 360° x 90° super-wide field of view, RS-Bpearl can precisely identify obstacles around the vehicle surface like pets, children, roadbeds and much more.

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

Product Advantages



Blind Spot <10 cm

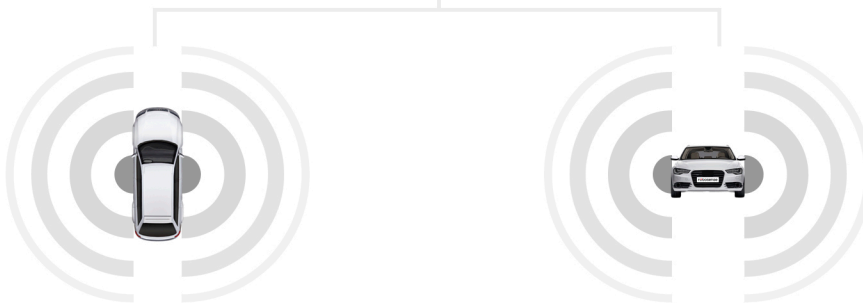


360° x 90° Super Wide FOV



-30° C
Temperature Resistance

Unique FOV Designed for Near-Field Blind-Spot Detection



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RoboSense LiDAR

www.robosense.ai

Sensor			
# of Lines	32	Horizontal FoV	360°
Laser Wavelength	905 nm	Vertical FoV	90° (0°~+90°)
Laser Safety	Class 1 eye safe	Horizontal Resolution ²	0.1°/0.2°/0.4°
Range ¹	100 m (30 m@10% NIST)	Vertical Resolution	2.81°
Blind Spot	≤0.1 m	Frame Rate	5 Hz/10 Hz/20 Hz
Range Accuracy (Typical) ³	Up to ±3 cm	Rotation Speed	300/600/1200 rpm (5/10/20Hz)

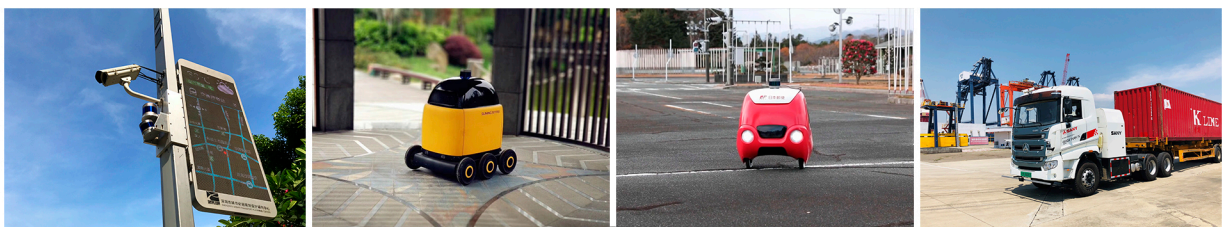
Output	
Points Per Second	~576,000pts/s (Single Return) ~1,152,000pts/s (Dual Return)
Ethernet Connection	100 Mbps
Output	UDP packets over Ethernet
UDP Packet include	Spatial Coordinates, Intensity, Timestamp, etc.

Mechanical / Electrical / Operational			
Operating Voltage	9–32 V	Dimension	φ100 mm * H111 mm
Power Consumption ⁴	13 W	Operating Temperature ⁵	-30° C ~ +60° C
Weight (without cabling)	~0.92 kg	Storage Temperature	-40° C ~ +85° C
Time Synchronization	\$GPRMC with 1PPS,PTP	Ingress Protection	IP67

Applications



Autonomous Driving



V2X

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 corresponding operating frequency of 0.1°/0.2°/0.4° is 5Hz/10Hz/20Hz.

3 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.

4 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.

5 The operation temperature is depending on circumstance factors, not only sun load and air flow but also including other uncontrollable factor