RS-LiDAR-32

200m Range/0.33° Minimum Vertical Resolution

RS-LiDAR-32 is a mass production 32 beam solid-state hybrid LiDAR product developed by RoboSense.

The development of the RS-LiDAR-32 follows closely OEM requirements, which put emphases on stronger performance in high-speed driving environments and smaller sensor footprint.
The laser beams of the RS-LiDAR-32 are non-uniformly distributed at a super wide 40°vertical FOV with super high angular resolution of up to 0.33° in the middle part and relatively lower angular resolutions on both ends. Such design steers the scanning region of interest of the LiDAR to the driving space and brings the RS-LiDAR-32 even better detection performance than that of common 64 beam LiDAR products.

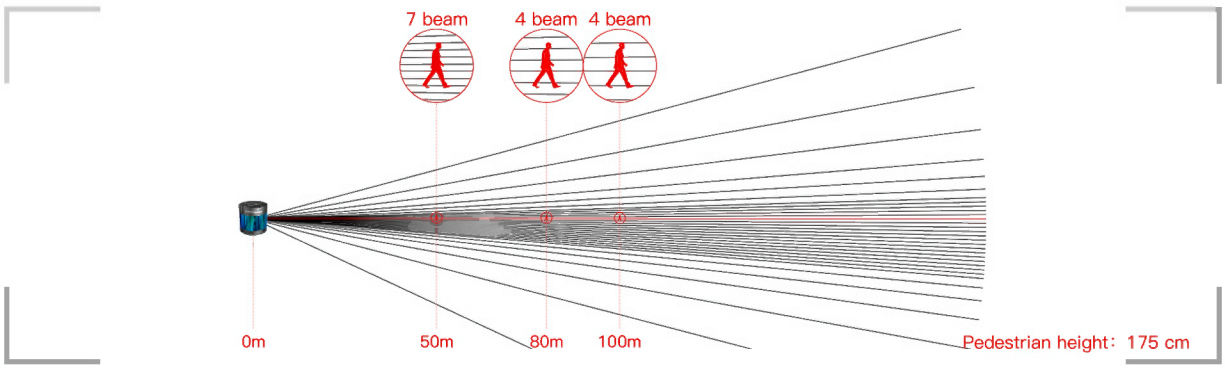
Product Advantages

200m Measurement Range

40°Vertical FOV

-30℃ Cold-Resistant

「Middle Part Beams: 0.33° Vertical Angular Resolution, Focusing on the Driving Space」



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RoboSense LiDAR

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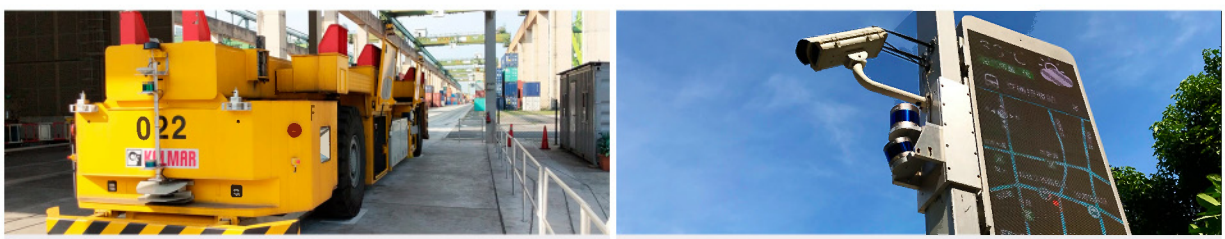
Sensor			
# of Lines	32	Horizontal FoV	360°
Laser Wavelength	905nm	Vertical FoV	40°
Laser Safety	Class 1 eye safe	Horizontal Resolution[2]	0.1°/0.2°/0.4°
Range[1]	200m(150m@10% NIST)	Vertical Resolution	Up to 0.33°
Blind Spot	≤0.4m	Frame Rate	5Hz/10Hz/20Hz
Range Accuracy (Typical)[3]	Up to ±3cm	Rotation Speed	300/600/1200rpm(5/10/20Hz)

Output	
Points Per Second	~600,000pts/s (Single Return Mode) ~1,200,000pts/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	ϕ114mm * H108.73 mm
Power Consumption[4]	13.5W	Operating Temperature[5]	–30°C ~ +60°C
Weight(without cabling)	~1.13 kg	Storage Temperature	–40°C ~ +85°C
Time Synchronization	$GPRMC with 1PPS	Ingress Protection	IP67

Applications

Autonomous Driving



Industrial

V2R

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 factors.