robosense

rs ruby

128 Beam, Minimum 0.1° Vertical Angular Resolution, 200m Range @10% Reflectivity

RS-Ruby is a 128 beam LiDAR specially designed for L4+ autonomous driving. Compared with RS-LiDAR-32, RS-Ruby has a 3 times higher vertical angular resolution of 0.1°, and a maximum detection range improved by 2 to 3 times. RS-Ruby fully fulfills the requirements of high speed autonomous driving.

RS-Ruby meets the requirement on low working temperature down to -30℃, and has achieved breakthrough in anti-interference : Resist interference of other LiDAR and ambient light in all-weather. It is an excellent choice for advanced autonomous driving.

The combination of RS-Ruby and RS-Bpearl offers new possibility for the environment perception of Robotaxi applications.

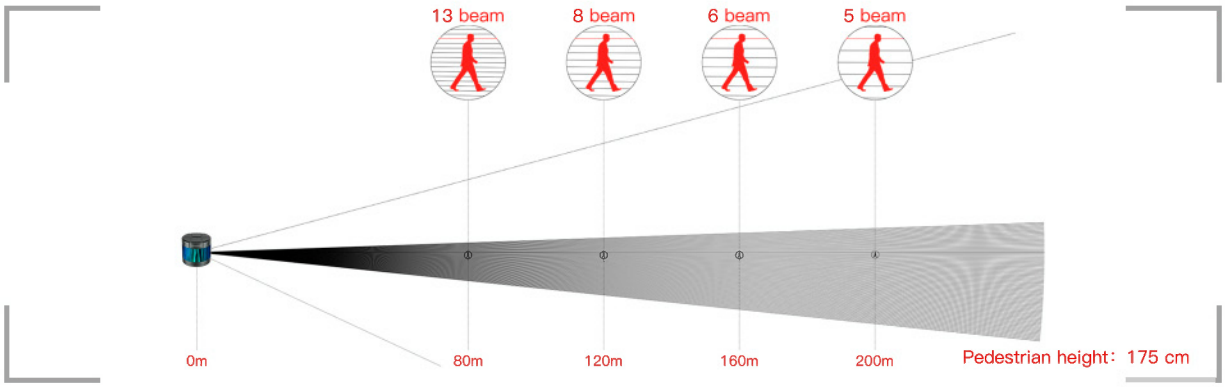
Product Advantages

200m on 10% NIST

-30℃
Cold-Resistant

Resist Interference Of Other
LiDAR & Ambient Light

「0.1° Vertical Angular Resolution, Designed for Detection of Long-Distance Obstacles」



RoboSense / Suteng Innovation Technology Co., Ltd.
10-11/F, Block 3, Chongwen Garden, Nanshan IPark, 3370 Liuxian Avenue, Shenzhen, China / 0755-86325830 / service@robosense.cn

RoboSense LiDAR

www.robosense.ai

Sensor			
# of Lines	128	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]	250m(200m@10% NIST)	Vertical Resolution	Up to 0.1°
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	2,304,000pts/s (Single Return Mode) 4,608,000pts/s (Dual Return Mode)
Ethernet Connection	1000 Mbps
Output	UDP packets over Ethernet
UDP Packet include	Spatial Coordinates, Intensity, Timestamp, etc.

Mechanical / Electrical / Operational			
Operating Voltage	19V ~ 32V	Dimension	ϕ166mm * H148.5 mm
Power Consumption[4]	45W	Operating Temperature[5]	–30°C ~ +60°C
Weight(without cabling)	~3.75 kg	Storage Temperature	–40°C ~ +85°C
Time Synchronization	$GPRMC with 1PPS, PTP	Ingress Protection	IP67

Applications

Autonomous Driving

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.