RS-Ruby-80

More Compact In Shape, And More Prominent In Cost Performance

RS-Ruby-80, the new 80-beam LiDAR, is developed on the RS-Ruby Plus platform. It is equipped with 0.1 ° vertical angular resolution and 180m @10% NIST range and a perception distance of 180m, which fully meet the environment perception needs of autonomous driving passenger cars, trucks, buses, tramcars and other vehicles.

Compared with RS—Ruby Lite, RS-Ruby-80 has reduced volume by 50%, weight by 50% and power consumption by 28%, and the performance has been greatly improved.

Meanwhile, RS-Ruby-80's stronger ground detection capability and excellent reflectivity performance complement each other to achieve longer traffic lane line detection range.

Product Advantage

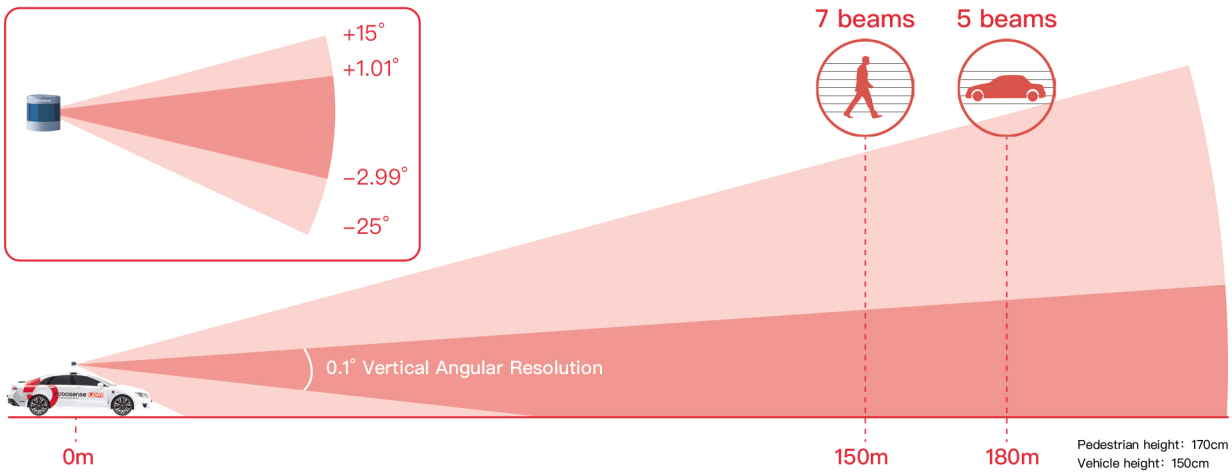
180m @10% NIST

0.1° Vertical Angular Resolution

Longer Traffic lane line Detection Range

Resists Interference Of Other LiDAR & Ambient light

41 Channels With 0.1° Vertical Angular Resolution, With A Perception Distance Of Close To 180m



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RoboSense LiDAR

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Sensor			
# of Lines	80	Vertical Resolution	0.1° (−2.99°~+1.01°)
Laser Wavelength	905 nm	Horizontal FoV	360°
Laser Safety	Class 1 eye safe	Horizontal Resolution[5]	[Balance] 0.2° / 0.4° [High Performance] 0.1° / 0.2°
Blind Spot	≤0.4m		
Vertical FoV	40° (−25° ~+15°)	Frame Rate	10 Hz/20 Hz
Range[6]	200m(180m@10% NIST)	Rotation Speed	600/1200 rpm (10/20 Hz)
Range Accuracy (Typical)[2]	Up to ±3 cm		

Output			
Points Per Second	[Balance] ~1,440,000pts/s(Single Return) ~2,880,000pts/s((Dual Return) [High Performance] ~2,880,000pts/s(Single Return) ~5,760,000pts/s(Dual Return)		
Ethernet Connection	1000 M Base T1	Output	UDP packets over Ethernet
UDP Packet include	Spatial Coordinates, Intensity, Timestamp, etc.		

Mechanical / Electrical / Operational			
Operating Voltage	9–32V	Dimension	ϕ125.00 mm * H128 mm
Power Consumption[3]	[Balance] 24W [High Performance] 27W	Operating Temperature[4]	−40℃ ~ +60℃
Weight(without cabling)	~1.85 kg	Storage Temperature	−40℃ ~ +85℃
Time Synchronization	$GPRMC with 1PPS, PTP & gPTP	Ingress Protection	IP67、IP6K9K

Applications




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 under 100 klux light. The test performance is dependent on circumstantial factors, including temperature, range, target reflectivity and other variables.
3. The power consumption is tested under a 10 Hz frame rate. The results are dependent on circumstantial factors, including temperature, range, target reflectivity and other variables.
4. The operational temperature is dependent on circumstantial factors, including sun load, air flow and other variables.
5. The corresponding operating frequency of 0.2°/0.4° is 10Hz/20Hz.
6. The detection range is measured under 100 klux light. The range performance is dependent on circumstantial factors, including temperature, range, target reflectivity and other variables.