



RS-Helios-16P

New Generation 16-beam LiDAR
Longer Detection Range,
Faster Data Transmission

RS-Helios-16P is developed on the new generation mechanical LiDAR platform. The performance has compared with its previous generation, RS-LiDAR-16, its detection range has been greatly improved, the near-field blind spot range is reduced from 0.4m to 0.2m, and the detection range for 10% low reflectivity objects reached 90m.

Meanwhile, RS-Helios-16P data transmission mode is upgraded to on-board Ethernet interface, which supports hardware synchronization (GPS + PPS) and network synchronization (PTP time synchronization) protocols, greatly reducing the transmission delay and simplifying the cable layout.

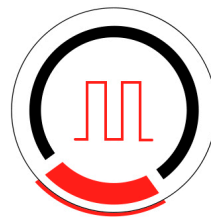
Product Advantage



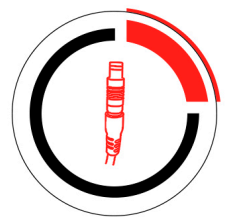
Multiple Operation Modes:
High Performance, Standby, Etc.



Web Configuration And
Monitoring Supported

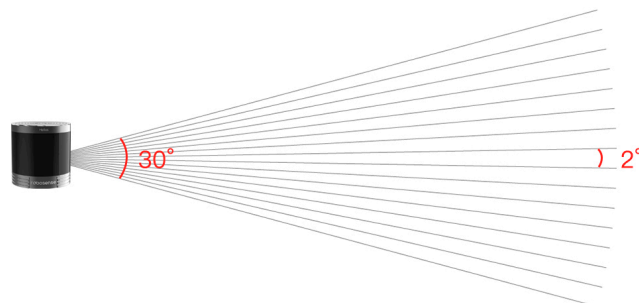


Output External
Trigger Pulse



On-Board
Ethernet Connection

RS-Helios-16P: 30° Vertical FoV, 16-Beam Even Distribution



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RoboSense LiDAR

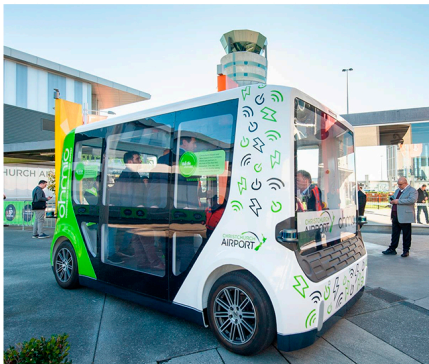
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Sensor			
# of Lines	16	Horizontal FoV	360°
Laser Wavelength	905 nm	Vertical FoV	30° (-15° ~ +15°)
Laser divergence (Full angle)	Horizontal 1.6mrad、Vertical 6.9mrad	Horizontal Resolution	0.2°/ 0.4°
Laser Safety	Class 1 eye safe	Vertical Resolution	2°
Range ¹	150 m (90 m@10% NIST)	Range Accuracy (Typical) ²	±2 cm
Blind Spot	≤0.2 m	Frame Rate	10 Hz/ 20 Hz
Rotation Speed	600/ 1200 rpm (10/20 Hz)		

Output	
Points Per Second	288,000pts/s (Single Return Mode) 576,000pts/s (Dual Return mode)
Ethernet Connection	100M-Base-T1
Output	UDP packets over Ethernet
LIDAR Packet include	Spatial Coordinates, Intensity, Timestamp, etc.

Mechanical / Electrical / Operational			
Operating Voltage	9V – 32V	Dimension	φ97.5 mm * H100 mm
Power Consumption ³	11W (Typical Value)	Operating Temperature ⁴	-30°C ~ +60°C
Weight (without cabling)	0.99 kg	Storage Temperature	-40°C ~ +85°C
Time Synchronization	GPS+PPS、PTP	Ingress Protection	IP67

Applications



* 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.

1. The range is based on a 20% NIST diffuse reflector, and the test results will be affected by the environment, including but not limited to environmental temperature, light intensity and other 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 test results of the device will be affected by the external environment, including but not limited to factors such as the ambient temperature, the distance of the target, and the reflectivity of the target.

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