

SEED-101090061



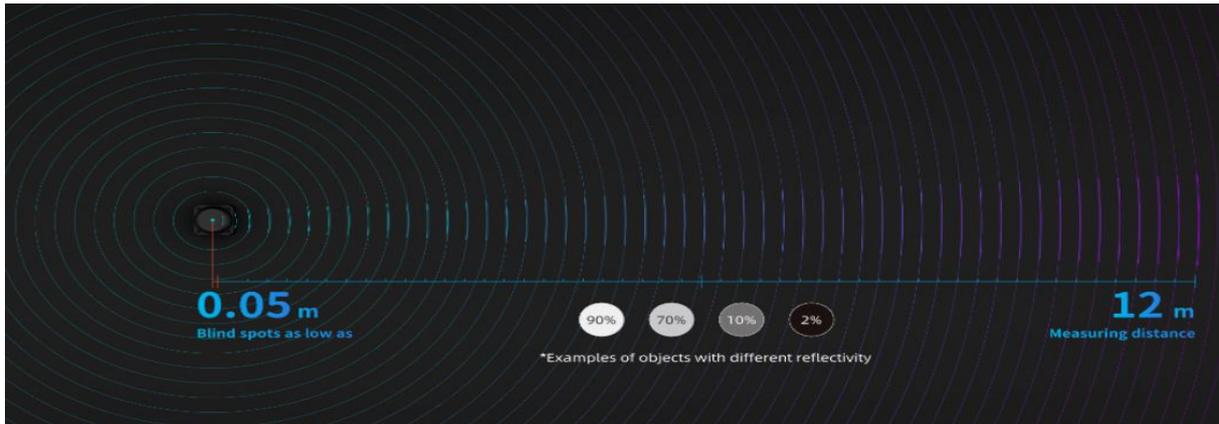
Feature

- **360 Degree 2D laser Scanner:** Offers 360-degree full-range laser scanning with a sampling frequency of 5000 times per second.
- **Enhanced Perception Capabilities Beyond Flat Surfaces:** Not only captures position information data but also provides reflectivity data and 2.5D multidimensional information.
- **Extended Measurement Range and Low Blind Range:** Has an impressive measuring distance of up to a 12-meter radius. It also boasts a remarkably low blind range of only 0.05 meters, enabling precise obstacle avoidance.
- **Compact and Agile Design:** Its small size, low levels of noise and vibration, and versatility make it easy to integrate into a wide range of applications, offering flexibility and adaptability.
- **Compliant with Class 1 Laser Safety Standard:** Utilizes a low-power infrared laser light source that is driven by modulated pulses. It adheres to the Class 1 Laser Safety Standard, ensuring the safety of human eyes.

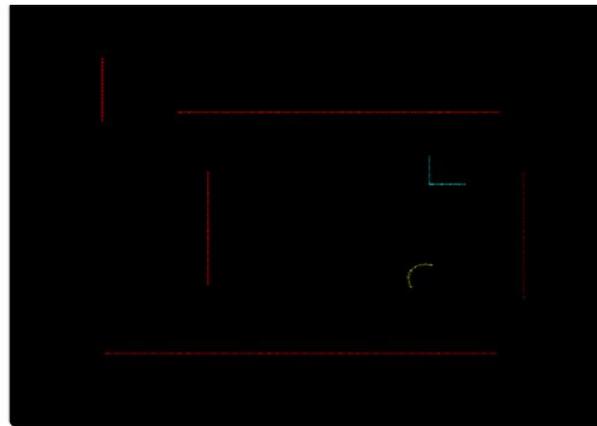
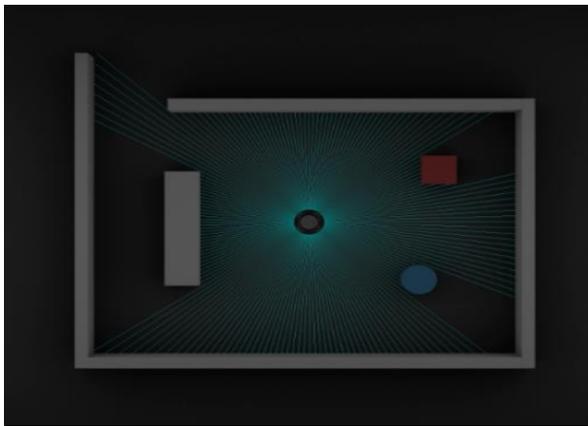
Description

The RPLiDAR C1M1-R2 Portable ToF Laser Scanner Kit is an advanced 360-degree 2D laser scanner (LIDAR) solution. It is based on the laser flight-of-time (TOF) ranging principle, offering high-speed rotation, allowing it to capture up to 5000 samples of laser ranging per second. By incorporating contactless power and signal transmission technology, it overcomes the limitations of traditional LIDAR systems, ensuring long-term stability and reliability.

With a measurement distance of up to a 12-meter radius and a minimal blind range of 0.05 meters, the RPLiDAR C1M1 excels in scanning, measuring objects at various distances, and achieving obstacle avoidance.



Its scanning frequency of 10Hz (600rpm) enables a sample rate of 5KHz and an angular resolution of 0.72°. It provides 2.5D multidimensional information, including position information data and reflectivity data.



Each RPLiDAR C1M1 undergoes rigorous testing to ensure compliance with the eye-safety standard of IEC-60825 Class 1, guaranteeing the laser output power is safe for human eyes.



The versatility of the RPLiDAR C1M1 makes it suitable for diverse applications, including home robots, educational ROS cars, commercial robots, autonomous vehicles in low-speed parks, and parking lot space monitoring. Despite its powerful performance, it features a compact and agile design with low noise and vibration levels, facilitating easy integration into a wide range of applications.

Specification	Detail
Distance Range	White object: 0.05-12 meters (under 70% reflection)
	Black object: 0.05-6 meters (under 10% reflection)
Sample Rate	5KHz
Scanning Frequency	8~12Hz, 10Hz@typical
Angular Resolution	0.72°@typical
Scan Field Flatness	0°~1.5° (can be customized)
Communication Interface	TTL UART
Communication Speed	460800
Accuracy	±30mm
Resolution	15mm
Degree of Protection	IP54
Ambient Light Limit	40,000lux