



RPLIDAR A2M8 - 360 Degree Laser Scanner Development Kit

SKU:DFR0445

Brand:SLAMTEC

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Topic: Robotics

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* Model:

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A2M6

A2M8

A3

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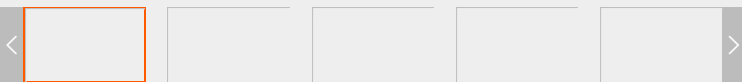
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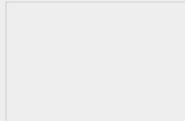


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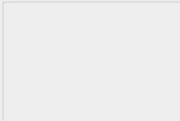
RPLIDAR A2M8 - 360 Degree Laser Scanner Development Kit

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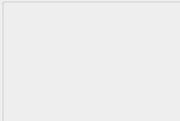
4WD Outdoor Mobile

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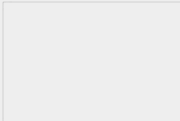
HCR... Microcontroller

+



2x15A DC Mo... Driver

+



Gravity: IO Exp... V7.1

=



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INTRODUCTION

The RPLIDAR A2M8 adopts the low cost laser triangulation measurement system developed by SLAMTEC, which makes the RPLIDAR A2 has excellent performance in all kinds of indoor environment and outdoor environment without direct sunlight exposure. Meanwhile, before leaving the factory, every RPLIDAR A2 has passed the strict testing to ensure the laser output power meet the standards of FDA Class I.

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The core of RPLIDAR A2 runs clockwise to perform a 360 degree omnidirectional laser range scanning for its surrounding environment and then generate an outline map for the environment.

RPLIDAR A2M8 - 360 Degree Laser Scanner Development Kit

4cm Ultra-thin

With the custom special parts and the carefully designed internal mechanical system, the RPLIDAR A2 keeps its excellent performance while cut the thickness to only 4cm. It is ideal for all kinds of service robot.

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The sample rate of LIDAR directly decides whether the robot can map quickly and accurately.

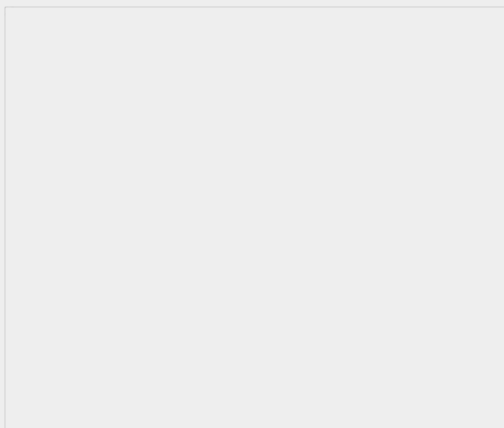
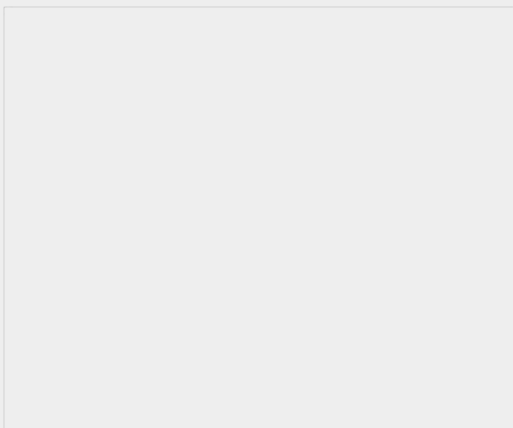
RPLIDAR improves the internal optical design and algorithm system to make the sample rate up to 8000 times, which is the highest in the current economical LIDAR industry.

Comparison under different conditions

10Hz 8000 Points

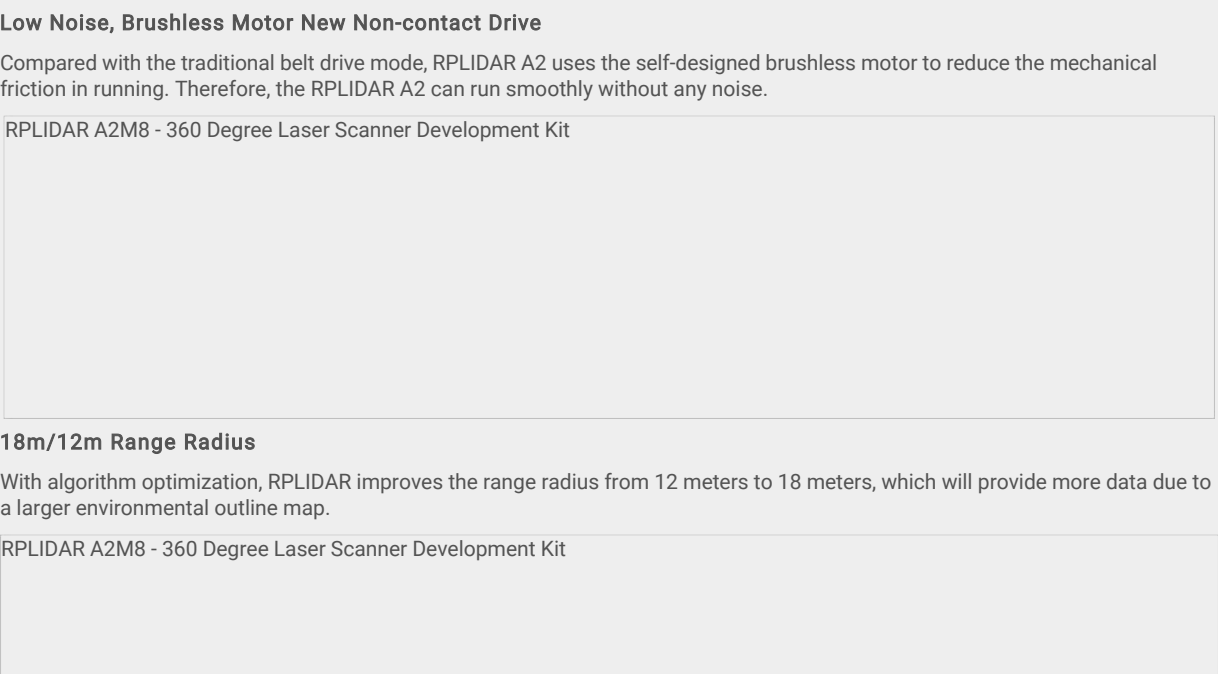
vs

10Hz 4000 Points



The core of RPLIDAR A2 runs clockwise to perform a 360-degree omnidirectional laser range scanning for its surrounding environment and then generate an outline map for the environment.

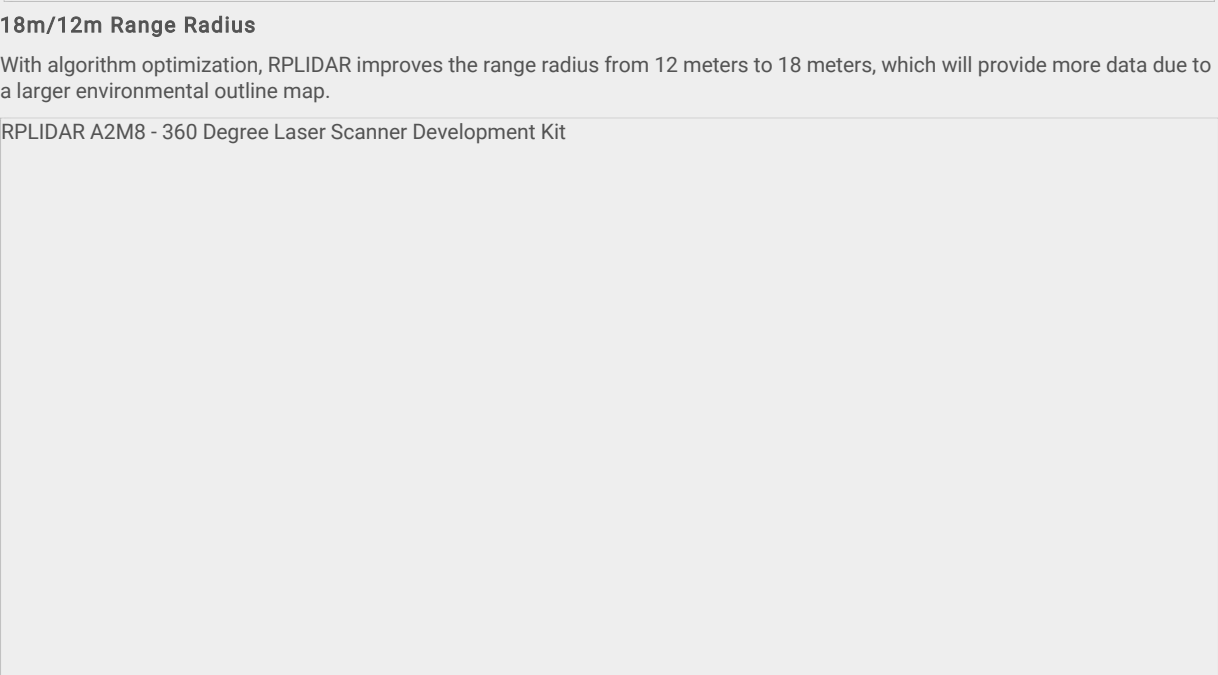
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Low Noise, Brushless Motor New Non-contact Drive

Compared with the traditional belt drive mode, RPLIDAR A2 uses the self-designed brushless motor to reduce the mechanical friction in running. Therefore, the RPLIDAR A2 can run smoothly without any noise.

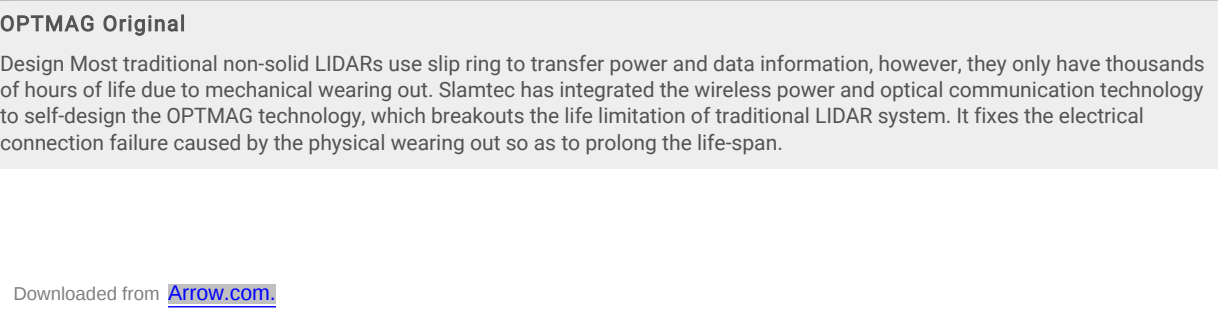
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18m/12m Range Radius

With algorithm optimization, RPLIDAR improves the range radius from 12 meters to 18 meters, which will provide more data due to a larger environmental outline map.

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OPTMAG Original

Design Most traditional non-solid LIDARs use slip ring to transfer power and data information, however, they only have thousands of hours of life due to mechanical wearing out. Slamtec has integrated the wireless power and optical communication technology to self-design the OPTMAG technology, which breakouts the life limitation of traditional LIDAR system. It fixes the electrical connection failure caused by the physical wearing out so as to prolong the life-span.

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RPLIDAR A2 adopts laser triangulation ranging principle and with high-speed RPLidar range engine, it measures distance data 8000 times per second and also has an excellent performance in a long distance.

Five years ultra-long life

With the brushless motor and OPTMAG technology, the RPLIDAR will work for 5 years(24 hours every day).

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APPLICATIONS

The Secret for a Freely Walking Robot

Matched solution for robot autonomous localization and navigation

RPLIDAR A2 as the core sensor, can quickly get the outline information of the environment.

Integrating the RPLIDAR A2 with SLAMWARE in robot, the robot can build maps, autonomously, find path in real time and avoid obstacles automatically.

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Multi-point Touch and Man-machine Interaction

Compared with traditional technology, with infrared laser device, the RPLIDAR A2 can realize the multi-point touch on a super-large screen, which has a higher resolution, reacts quickly and resists ambient light.

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Robot simultaneous localization and mapping (SLAM)

Environment scanning and 3D rebuilding

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Obstacle detecting and avoiding

Multi-point touching and man-machine interaction

SPECIFICATION

- Model: RPLDIAR-A2M8
- Distance Range: 0.15 - 12 m
- Angular Range: 0-360 degree
- Distance Resolution: <0.5mm(0.15mm~1.5 meters)
<1% of the distance (All distance range)
- Angular Resolution: 0.9degree
- Sample Duration: 0.25 millisecond
- Sample Frequency: ≥ 4000Hz
- Scan Rate: 10Hz
- Weight: 190g

DOCUMENTS

- [SLAMTEC Website](#)
- [RPLIDAR A2 Product Page \(Related Resource Download\)](#)
- [Datasheet](#)
- [Introduction to Standard SDK](#)
- [Laser Radar Selection Guide](#)

SHIPPING LIST

- RPLIDAR A2M8 - 360 Degree Laser Range Scanner x1

TUTORIAL

RPLIDAR Tutorial Review

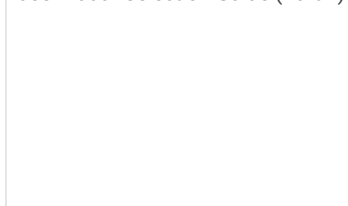


RPLIDAR Tutorial Review

Laser Radar

2018-03-07 07:49:31

Laser Radar Selection Guide (Part 1)



Laser Radar Selection Guide (Part 1)

Laser Radar

2020-03-13 16:17:05

REVIEW

FAQ

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Diego Redondo • 2 years ago

Is this item in stock?

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DFRobot Support Mod → Diego Redondo • 2 years ago

If you only need to buy one or two, you can contact store@dfrobot.com to deliver the goods after placing the order.

^ • Reply • Share >



AB • 2 years ago

Do anyone knows the HS code for this product? (RPLIDAR A2M8 - 360 Degree Laser Scanner Development Kit)

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 **AB** → AB • 2 years ago
HS code stands for Harmonized System (HS) code. This is an international nomenclature for the classification of products when shipping goods to other countries.
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 **Albatros** • 3 years ago
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 **Techno MasterDude** → DFRobot Support • 3 years ago
Are these the newer and cheaper ones? Or are we still waiting for those?
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 **DFRobot Support** Mod → Techno MasterDude • 3 years ago
Yes, this pre-order scanner is the new version.
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 **Andrey Ali** • 3 years ago
Is this item on stock?
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 **Miroslav Cibula** • 3 years ago
Is it water resistant?
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 **DFRobot Support** Mod → Miroslav Cibula • 3 years ago
I don't think so. Do you want to have the laser radar working in moist environment?
^ • Reply • Share >
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 **Miroslav Cibula** → DFRobot Support • 3 years ago
I want to mount it on the outdoor mobile robot and it must be water resistant in case of rain
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 **DFRobot Support** Mod → Miroslav Cibula • 3 years ago
The radar is not water proof, it can't used in rain
^ • Reply • Share >
↓

 **Miroslav Cibula** → DFRobot Support • 3 years ago
Do you know some water resistant lidar?
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 **DFRobot Support** Mod → Miroslav Cibula • 3 years ago
Is your robot needs high detecting frequency? What if using ultrasonic sensor to measure the distance? or maybe you can make a cover for your robot to resist the rain affection.
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 **Enno** • 4 years ago
Can this unit be mounted upside down? i.e. under a protuding shelf, etc?
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Enno → DFRobot Support • 4 years ago

mobile robot navigation

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Sure, it is most suitable for this application.

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dipesh • 4 years ago

hello i order this product on 26-10-2016..but after payment, mail come that its processing-back order..what does it mean?

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Hi, it means there are back-ordered items in your order. This item is expected to be available early next week. we will ship asap.

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Andi Zaugg • 4 years ago

I've found an other store in china but would prefer to order here. Could you please tell me when is expected?

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Hi, it is in stock and you can place order now,

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Ahmed Amin • 4 years ago

I am from Egypt if i pre-order it now when will it arrive here ?

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old man • 5 years ago

Do you have an actual shipping date? I need to buy one now and don't really want to buy version 1 if this comes out soon.

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Please be noted that it is for pre-order only, shipping is estimated to start from July, 2016.

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Tiago Caldeira • 5 years ago

When is expected? Can I order one now? Regards,

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DFRobot Support Mod → Tiago Caldeira • 5 years ago

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Tiago Caldeira → DFRobot Support • 4 years ago

Any update? I want one now :(

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DFRobot Support Mod → Tiago Caldeira • 4 years ago

we got updates that it will be available in September:(thank you for your patience.

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