SLAMTEC RPILIDAR A1

Basic Characteristics

- Height:55mm Width:96.8mm Weight:170g
- 12 m Range.
- 360 Degree Omnidirectional.
- 8000 Samples/s
- 5.5 Hz.
- Plug and Play (Compatible with ROS)

Kit Includes

- RPLIDAR A1 (PWM motor driver embedded
- USB Adapter
- RPLIDAR A1 communication cable
- USB Cable – Micro USB not included (SLAMTEC)

*Information Provided by SLAMTEC

* More information can be found here.

RPLIDAR A1 is based on laser triangulation ranging principle and uses high-speed vision acquisition and processing hardware developed by Slamtec. The system measures distance data in more than 8000 times per second.
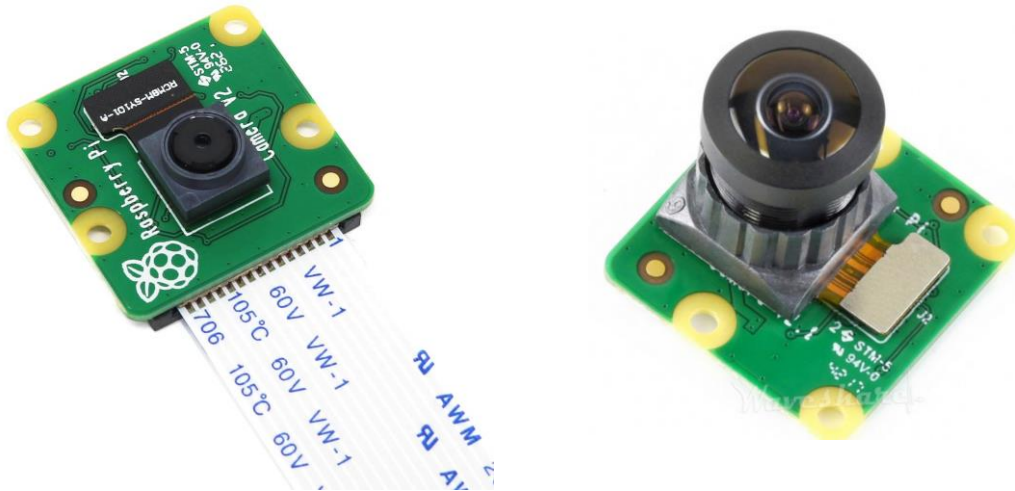
RPILIDAR A1 Characteristics

Key Parameters	
Recommended applications	Vacuum robot,Home robot
Measuring Range	0.15m - 12m
Sampling Frequency	8K
Rotational Speed	5.5Hz
Angular Resolution	≤1°
Dimensions	96.8 x 70.3 x 55mm
System Voltage	5V
System Current	100mA
Power Consumption	0.5W
Output	UART Serial (3.3 voltage level)

Temperature Range	0° C-40° C
Angular Range	360°
Range Resolution	≤1% of the range（≤12m） ≤2% of the range（12m∼16m）
Accuracy	1% of the range（≤3 m） 2% of the range（3-5 m） 2.5% of the range（5-25m）

*Information Provided by SLAMTEC
*For more information consult the RPILIDAR A1 M8 user manual and datasheet here.

Raspberry Pi Camera Module 2

Basic Characteristics

- Official Raspberry Pi Camera Board, supports Raspberry Pi, CM3/3+/4, Jetson Nano, Jetson Xavier NX

- IMX219 8-megapixel sensor

- CCD size : 1/4inch

- Aperture (F) : 2.0

- Focal Length : 3.04mm

- Angle of View (diagonal) : 62.2 degree

- 3280 × 2464 still picture resolution

- Support 1080p30, 720p60 and 640x480p90 video record

Kit Includes

- RPI Camera Module V2

- IMX219 Camera Module, 160 degree FoV.

The Camera v2 is the new official camera board released by the Raspberry Pi foundation.

MCR2 Inlcudes an IMX219 Camera Module, 160 degree FoV. To improve the Field of view of the robot.

Raspberry Pi Camera Module 2

Key Parameters	
Size	Around 25 × 24 × 9 mm
Weight	3g
Still resolution	8 Megapixels
Video modes	1080p47, 1640 × 1232p41 and 640 × 480p206
Sensor	Sony IMX219
Sensor resolution	3280 × 2464 pixels
Sensor image area	3.68 x 2.76 mm (4.6 mm diagonal)
Pixel size	1.12 µm x 1.12 µm
Optical size	1/4"
Focus	Adjustable

Depth of field	Approx 10 cm to ∞
Focal length	3.04 mm
Horizontal Field of View (FoV)	62.2 degrees
Vertical Field of View (FoV)	48.8 degrees
Focal ratio (F-Stop)	F2.0
Maximum exposure times (seconds)	11.76
Lens Mount	N/A
	Information Provided by Raspberry Pi. More information can be found here.
IMX219 Camera Module, 160 degree FoV.	• Aperture (F) : 2.35 • Focal Length : 3.15mm • Angle of View (diagonal) : 160 degree. • Distortion: < 14.3% • Focusing Range: 20cm ~ infinity More information about the Wide View sensor can be found here.