Indoor Scanning LiDAR

YRL Series

Wide Field of View

YRL series are 2D/3D scanning LiDAR (Light Detection and Ranging) and optimized solutions for indoor applications covering wide fields of view, as a single channel. The YRL is based on direct ToF (Time of Flight) and is designed to measure distances from its surroundings and collect point cloud datas.

Key Feature

- ✓ ToF (Time of Flight) Single Channel LiDAR
- ✓ Low Cost and Compact
- ✓ Wider Field of View
- ✓ Adjustable Vertical Angle (Only 3D LiDAR)
- ✓ ROS Compatible
- ✓ Quick and Scalable Software Support

ROS

Indoor Scanning LiDAR, YRL Series

YRL series is an optimized solution for object detection, indoor mapping, modeling, navigation, localization, and other uses in robotics and industry.
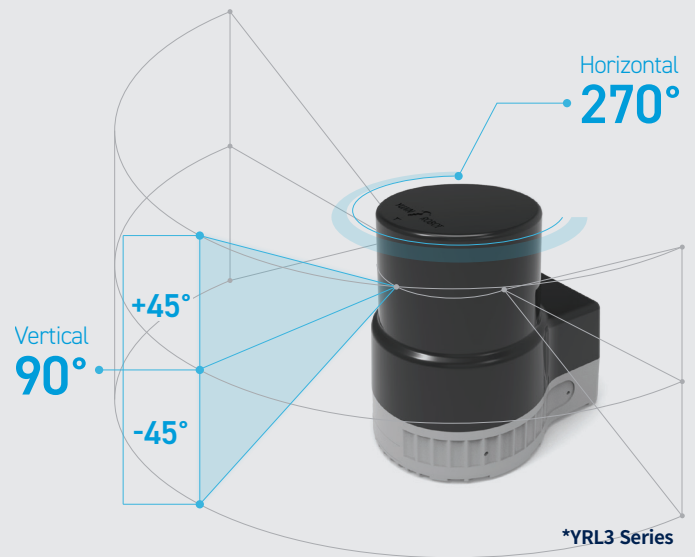
270° / 90°
Field of View
*Only YRL3

Compact

IP67
Enclosure Rating

CLASS 1
Eye Safety

Horizontal
270°

Vertical
90°

+45°

−45°

*YRL3 Series

Applications

Service Robots
Mapping and Localization
Workplace Identification
SLAM

AGVs / AMRs
Anti-collision
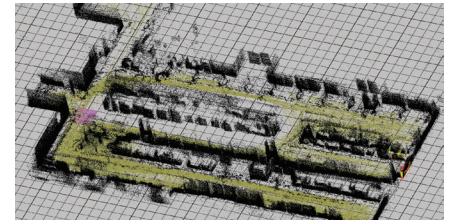Object Detection
Workplace Identification

Industrial
High-speed Precision Control
Hazardous Area Protection
Collision Avoidance and Warning

YUJIN SLAM & Navigation

The YRL 2/3 series is for a variety of applications such as robotics, industrial, and more. Powered by ROS (Robot Operating System), they provide more accurate and flexible data to your mobility solution for a vast range of robotic applications.

- **YUJIN SLAM Algorithm**
- **ROS Compatible**
- **Point Cloud Map Building**
- **Navigation** (Local Map, Path Planning, Tracking)

Specifications

YRL series	Environment		Indoor					
	Type		2D LiDAR			3D LiDAR		
	Model Name		YRL2-05	YRL2-10	YRL2-20	YRL3-05	YRL3-10	YRL3-20
Basic	Measurement Range		0.1m~5m	0.1m~10m	0.1m~20m	0.1m~5m	0.1m~10m	0.1m~20m
	Collection Angle	Horizontal	270°					
		Vertical	-			90° (-45° ~ +45°)		
	Laser Class		Class 1, eye safety (IEC 60820-1:2014)					
	Laser Wavelength		905nm					
	Scanning Frequency	Horizontal	20Hz					
		Vertical	-			0.57Hz (1scan 1.76sec. If vertical 90°)		
	Range Resolution		<10mm					
	Angular Resolution	Horizontal	0.55°					
		Vertical	-			0.35° (257 steps)		
Performance	Sampling Rate		130,000					
	Data Packet Rate		9,750					
	Response Time		>50ms			>50ms per layer		
Interface	Communication Interface		100Mbps Ethernet					
	Optical Indicators		1 x LED (Green : Available, Red: Error)					
	Output Data		Horizontal Angle, Range, Intensity, Cartesian coordinates (x,y)			Horizontal Angle, Vertical Angle, Range, Intensity, Cartesian coordinates (x,y,z)		
Mechanics/ Electonics	Electrical Connection		1 x M8 for Power, 1 x M12 for Data					
	Supply Voltage		DC 12V					
	Power Consumption		5W			6W		
	Material		Top window cover (PC), Bottom cover (AL)					
	Enclosure Rating(IP)		IP 67					
	Temperature Resistance		-10° ~ 50°					
	Weight		400g					
	Dimension (WxDxH)		65mm x 85mm x 91.40mm					
Certificates and Compliance			KC, CE, RoHS					

* Specifications and design are subject to change without any prior notice.

YUJIN ROBOT

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