

2D 360° Survey LiDAR LR-1F 2D LiDAR Sensor



- 360° full-angle scanning, up to 50m
- Compatible with reflector navigation and natural navigation, and suitable for application requirements of hybrid navigation
- Highly reliable motor design: cope with high-speed and bumpy operating environments
- Angular resolution: up to 0.06°
- Horizontal plane error $\pm 0.5^\circ$ to ensure horizontal scanning distance
- 60k/s point cloud density: provide azimuth, distance, reflection strength
- Certification: FCC, EMC, CE, RoHS, REACH, FDA
- IP66 Protection Level



Robotics



Security



Industrial



Intelligent
logistics



Specification table

Item	Unit	Specification
Laser wavelength	nm	905±20
Laser safety level		Class 1 (IEC 60825-1:2014)
Laser channels		1
Field of view((horizontal)	°	360
Beam divergence	mrاد	longitudinal 5.8 mrad transversal 2.6 mrad
Scanning frequency	Hz	10~25
Angle resolution (horizontal)	°	0.06@10Hz, 0.09@15Hz, 0.12@20Hz, 0.15@25Hz
Distance resolution		1
Measurement range	m	0.2~5m@2% reflectivity 0.2~15m@10% reflectivity 0.2~50m@80% reflectivity 0.2~50m@reflector
Accuracy	mm	Common targets: Absolute Accuracy: <±20mm Reflector: Absolute Accuracy: <±40mm Repeate accuracy: <20mm
Signal strength		0-60000
Ethernet connection		100Mbps Ethernet
scanning rate	pts	60K
Connection		5-pin, M12x1 connector, A-coded (supply) 8-pin, M12x1 socket, A-coded (LAN)
Horizontal error (Horizontal angle)	°	≤±0.5°
Switching outputs	ea	1
Mechanical dimensions	mm	95*97*116
Operating voltage	VDC	12~30
Power consumption @25℃	W	7 @15Hz
Weight	g	<900g
Degree of protection		IP66
Operating temperature	℃	-20~+50
Storage temperature	℃	-30~+70
Air humidity	RH	<95%
Optical Indicators		RGB*4
Ambient light limit	LUX	<120000
Mounting		Bottom/Back
EMC		IEC 61000-6-2:2016-08 /IEC 61000-6-3:2006-07
Vibration resistance		IEC 60068-2-6:2007
Shock resistance		IEC 60068-2-27:2008
Basic software		OLAMViewer/ROS driver

Outline and mounting

