

## MID-360-cab3in1

Small But Mighty (cable is included)



MID-360-cab3in1 is the latest generation of Livox LiDAR for low speed robotics. This new product inherits the cost-effectiveness of the Livox Mid series and delivers 3D perception in 360 degrees. Compact and lightweight, this LiDAR module is easy to install. The Mid-360-cab3in1 is optimized based on the navigation and obstacle avoidance requirements of mobile robots. This allows you to use the LiDAR with algorithms to deliver a wide range of functions such as SLAM and obstacle avoidance.

360° * 59°	0.1m	40m
FOV	Min. Detection Range	@10% Reflectivity
40-line	65*65*60	265g

Point Cloud Density

L × W × H (mm)

Weight



### 360° Super-Wide FOV

Unlike conventional mechanical LiDAR, the MID-360-cab3in1 is powered by Livox's unique rotating mirror hybrid-solid technology. And Mid-360 is the first to improve the horizontal FOV to 360° and the vertical FOV to 59°. The omnidirectional ultra-large FOV coverage provided by the MID-360-cab3in1 LiDAR helps mobile robots accurately perceive their surroundings in all directions. This provides the basis on which mobile robots can formulate plans and make decisions.

### **Specification**

Model	:	MID-360-cab3in1
Maker	:	Livox Technology Company Limited
Laser Wavelength	:	905 nm
Laser Safety	•	Class 1 (IEC60825-1:2014)(Eye Safety)
The divergence of the embedded laser is 25.2° (horizontal) × 8° (vertical), which was measured at		
full width at half maximum. The maximum power of the embedded laser may exceed 70 W. In order		
to avoid being injured by the laser, DO NOT disassemble Livox Mid-360-cab3in1.		
Detection Range	:	<ul> <li>40 m @ 10% reflectivity</li> </ul>
(@ 100 klx)		<ul> <li>70 m @ 80% reflectivity</li> </ul>
Close Proximity Blind Zone	:	0.1 m
Target objects within 0.1 to 0.2 m from Mid-360-cab3in1 can be detected and point cloud data can		
be recorded. However, since the detection precision cannot be guaranteed, the data should be		
taken as a reference only.		
FOV	:	Horizontal: 360°, Vertical: -7°~52°
Range Precision (10)	:	≤ 2 cm <sup>4</sup> (@ 10m)
To detect objects having different		
reflectivities within the detection range,		

the accuracy of point cloud data of very few positions might decrease slightly.		Tested in an environment at a temperature of 25° C (77° F) with a target object that has a reflectivity of 80% and is 10 meters away from Livox Mid-360. ■ ≤ 3 cm (@ 0.2m)
		Tested in an environment at a temperature of 25° C (77° F) with a target object that has a reflectivity of 80% and is 0.2 meters away from Livox Mid-360. For target objects within 0.1 to 1 m away from the Mid- 360, if they have a low reflectivity or are thin and tiny, the detection effect cannot be guaranteed. These objects include but are not limited to black foam and the surface of water or objects that have been polished, have a matte finish, thin lines, etc.
Angular Precision $(1\sigma)$	:	< 0.15°
Point Rate	:	200,000 points/s (first return)
Frame Rate	:	10 Hz (typical)
Data Port	:	100 BASE-TX Ethernet
Data synchronization	:	IEEE 1588-2008 (PTPv2), GPS
Anti-Interference Function	:	Available
False Alarm Rate (@ 100 klx)	:	< 0.01%

The false alarm ratio of the noise created by the stray light in a test environment of 100 klx at a temperature of 25° C (77° F).

IMU	•	Built-in IMU Model: ICM40609
Operating Temperature	:	-4°F to 131°F (-20°C to 55°C)

The performance of Livox Mid-360-cab3in1 might slightly decrease in high-temperature or lowtemperature environments, or environments with strong vibrations or heavy fog, etc. Besides, operating at a high temperature for an extended period of time may negatively affect performance and may lead to permanent damage to the product. It is recommended to apply extra heat dissipation measures to ensure that the temperature of the shell does not exceed 80° C (176° F). A high temperature will trigger the high-temperature protection mechanism, and Livox Mid-360cab3in1 will issue a high-temperature warning. Livox Mid-360-cab3in1 will stop operating automatically if the temperature is too high.

IP Rating	:	IP67	
Power	:	6.5 W (average)	
When the ambient temperature is from -20° C (-4° F) to 0° C (32° F), Livox Mid-360-cab3in1 will			
automatically enter self-heating mode, where the peak power may reach 14 W. Make sure to design			
the power supply reasonably to ensure the LiDAR sensor works normally.			
Connector 1-to-3 Splitter Cable	:	1.8m length	
Power Supply Voltage Range	:	9 ~ 27 V DC	
Dimensions	:	65×65×60 mm	
Weight	:	265 g	

# LIVOX

#### Livox Technology Company Limited

Livox is committed to breaking through the current technological barrier in the LiDAR industry and helping customers incorporate LiDAR sensors into efficient commercialization of their projects. Our products have been sold to 26 countries and are being widely applied in industries such as autonomous driving, robots, 3D mapping, smart city, safety and more.

www.livoxtech.com