



Contact Us

Sunnyvale, USA
Core R&D center and North American
Business development Center

+01 (650) 963-9573

160 San Gabriel Dr., Sunnyvale,
CA 94086, U.S.A.

Frankfurt, Germany
European Business Development
Center

+49 6196 96988 01

Frankfurter Str. 92
65760, Eschborn, Germany

Suzhou, China
Core R&D and Business Development
Center

+86 0512-67888711
info@cn.seyond.com

3F/4F/5F, Building 9A, Yangtze River Delta
International R&D Community, Qinglonggang
Road, Xiangcheng District, Suzhou

Smart Shipping Solution

Based on High-performance Image-grade LiDAR

Smart Shipping Solution

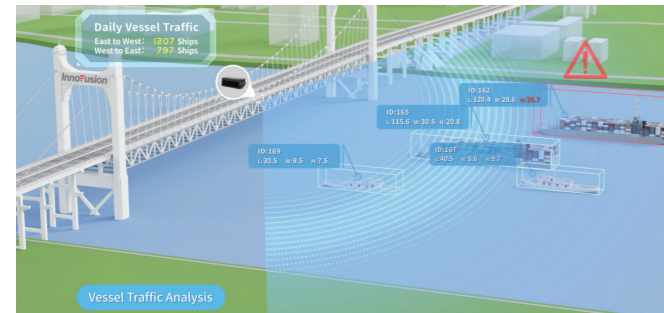
Based on High-performance Image-grade LiDAR

- Recently, with the acceleration of infrastructure construction, the number of bridges has increased continuously, and incidents of ships colliding with bridges have occurred frequently, causing huge economic losses. Therefore, proactive collision warning for bridges has gradually gained attention.
- On the other hand, the informatization of waterways is relatively low, and it's urgent to transform from traditional manual management to digital management.
- Seyond's smart shipping solution, based on high-performance image-level LiDAR, provides 7×24H, all-weather, high-precision monitoring of waterways. It provides enforcement departments and bridge maintenance personnel with ship traffic flow information and bridge collision warning information. Through ship-shore collaboration and early warning, it effectively prevents incidents of ships colliding with bridges, and assisting in the informatization of waterways.

Application Scenarios

1 Vessel Traffic Analysis

Installed on both sides of the shore, LiDAR operates 7x24H to monitor and record vessel traffic on the waterway. It automatically logs information such as the number of ships passing by, their course, speed, length, width, draught, carrying cargo or not, and over height or not. This is the basic data for active bridge collision warnings, providing stable and reliable data for the informatization of waterways.





2 Bridge Active Collision Warning

Installed on the bridge or shore, it performs all-weather, high-precision 3D dimension detection and location trajectory tracking of passing ships on the waterway. It proactively identifies target vessels posing a threat to the safety of the bridge and promptly issues over-height or off-course warning signals, significantly reducing ship-bridge collision accidents.



Competitive Advantages

 Non-contact Active Detection	 Ultra-long Detection Range for Early Warning	 Ultra-high Resolution for Intelligent Decision	<i>7x24</i> 7×24H All-weather Monitoring	 Automotive-grade Reliability
---	---	---	---	---

Smart Lock Gate Solution

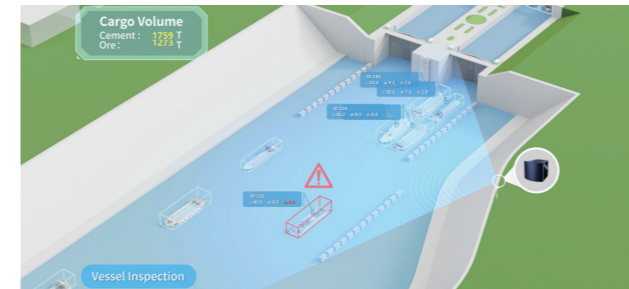
Based on High-performance Image-grade LiDAR

- The smooth operation of water transport hubs relies heavily on ship lock gates. At present, ship lock gate inspection is mainly done manually to review the dimensions of ships passing through the locks, which is both time-consuming and labor-intensive.
- Moreover, there are often multiple ships passing through the lock gate at the same time. When closing of the lock gates, if a ship has not completely exited the lock chamber, it may cause serious collision damage to both the lock gate and the ship.
- Seyond's smart ship lock solution, based on high-performance image-grade LiDAR, provides high-precision detection of ship three-dimensional contours and spatial location, assisting in increasing the efficiency of ships passing through the locks, standardizing ship lock behavior, effectively reducing the occurrence of ship overloading situations, and promoting the digital management of ship locks.

Application Scenarios

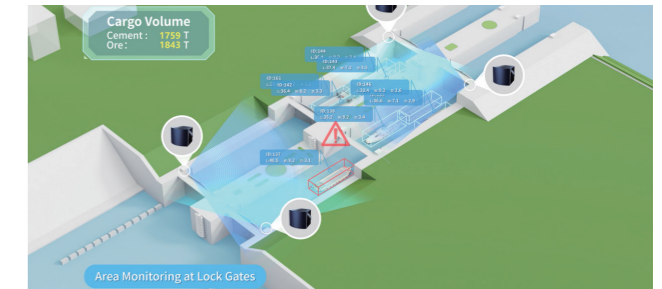
1 Vessel Inspection

LiDAR performs high-precision dimension detection on ships before they enter the lock gates. The detected dimension information is compared to the one in the billing system to assist in digital supervision; at the same time, with the declared ship information, the vessel traffic volume passing through the lock can be calculated.






2 Area Monitoring at Lock Gates

Installed in the lock chamber, LiDAR performs all-weather, high-precision tracking of the position trajectory of ships entering the lock gates. It supports the operators with 3D monitoring of the lock chamber, automated operation scheduling, and ensures the efficient operation of the lock and the safe and convenient passage of ships.



Products

 Falcon K	2m~500m(250m@10%) Detection Range	120°×25° Field of View(H×V)	0.05°×0.05° Best Angular Resolution(H×V)
	150 Lines@10FPS Vertical Scan Lines	5~30FPS Frame Rate	31.2W Power Consumption
 Robin E	0.2m~250m(180m@10%) Detection Range	120°×24° Field of View(H×V)	0.1°×0.2° Best Angular Resolution(H×V)
	128 Lines Vertical Scan Lines	10~20FPS Frame Rate	<9W Power Consumption
 Robin W	0.1m~250m(70m@10%) Detection Range	120°×70° Field of View(H×V)	0.1°×0.36° Best Angular Resolution(H×V)
	192 Lines Vertical Scan Lines	10~20FPS Frame Rate	<9W Power Consumption