

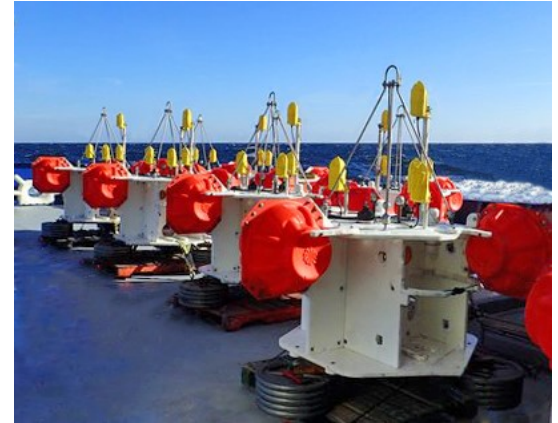
# ALTO Mooring System

Acoustic Long Term Observatory

## Product code: ALTO

The ALTO mooring system is a self-contained bottom lander for autonomous multisensor ocean observing. The robust polyethylene lander has three deep sea glass sphere floats and redundant acoustic releases that attach it to a sacrificial anchor for easy recovery. Along with an AMAR G4 Ultra Deep and external battery pack, there's ample space to add as many off-the-shelf sensors as you need for multivariable data collection.

The ALTO has been tested and refined over numerous deployments. With a single lift point it's simple and safe to deploy, just lift and drop and the ALTO lands upright on the seabed.



## BENEFITS

- Large sensor payload
- Directional acoustics
- Freefall deployment
- Stable in high flow

## APPLICATIONS

- Population density estimation
- Ecosystem studies
- Long term ocean observing
- Deep sea acoustic and biologic measurements



Ask us about the ALTO that was dragged 2.5 km and kept collecting data

## SPECIFICATIONS

Depth:	3500 m	Additional sensor options:	Fish tag loggers, dissolved oxygen, CTD, ADCP, AZFP, acidity/pH, others upon request
Standard equipment payload:	AMAR G4 Ultra Deep w/ 128 D cells AMAR UD Battery Sphere w/ 208 D cells 2 × PORT LF Acoustic Release Apollo Iridium beacon	WLL:	775 kg (5:1 safety factor)
Acoustic sensor options:	Omnidirectional hydrophones 50 cm tetrahedral hydrophone array Directional hydrophones	Max. anchor weight:	360 kg

### Simple deployments

Single lifting point  
Just lift and drop and the ALTO lands upright on the seabed

### Complete ecosystem data

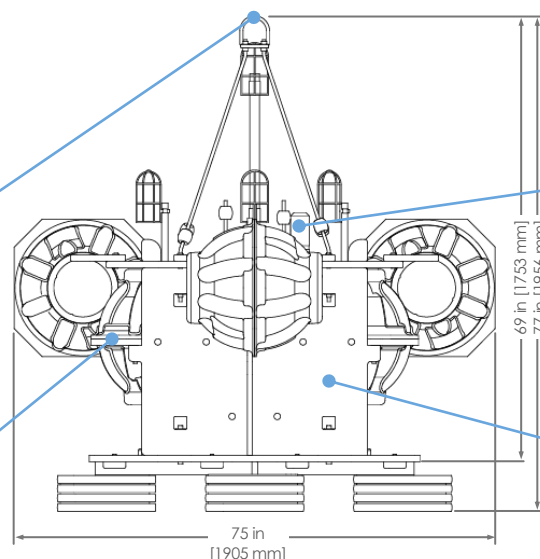
Houses as many sensors as you need  
High-bandwidth directional acoustic data

### Long term

AMAR G4 with 10 TB memory and powered by 336 D-cell batteries for year long deployments

### Rugged and ultra deep

High-density polyethylene frame protects the sensor payload within  
Protective cages surround the hydrophones



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