



# HydroVision SeaStar24

Integrated Passive Acoustic Camera for Precise Underwater Sound Localization



The HydroVision SeaStar24 is the first fully integrated underwater acoustic camera system engineered for rapid, precise, and intuitive localization of underwater sound sources.

Building on over 25 years of expertise in acoustic imaging, the SeaStar24 combines advanced detection, spatial mapping, and tracking capabilities for use in diverse marine environments. Designed to perform reliably under challenging conditions, it provides accurate real-time localization even in low-visibility or acoustically complex areas.

Unlike conventional sonar systems, the SeaStar24 operates fully passively, relying solely on received acoustic signals. This approach eliminates self-noise and signal interference, prevents disturbance of marine fauna, and enables covert, low-impact acoustic measurements.

The lightweight, foldable array features a double-ring geometry with 24 broadband hydrophones optimized for high spatial resolution and wide frequency coverage. It can be suspended via three mounting points or deployed on the seabed, offering flexible use for both stationary and mobile measurements. Engineered for depths up to 30 m, the system is compact, easy to transport, and mechanically robust for field operations.

## BENEFITS

- **Passive Acoustic Detection:** No emitted signals — silent, non-invasive, and environmentally safe.
- **High Localization Range:** Capable of accurately identifying sound sources over large distances.
- **Reliable in Low Visibility:** Maintains functionality where light and vision-based systems are ineffective.
- **High Precision:** Provides consistent and traceable localization results suitable for scientific and industrial use.

## APPLICATIONS

- **Marine Engineering:** Supports shipbuilding, navigation, and underwater operations.
- **Infrastructure Monitoring:** Enables precise measurement and assessment of underwater structures, pipelines, and installations.
- **Environmental & Marine Research:** Facilitates the study and protection of marine life without interference.
- **Exploration & Surveying:** Delivers dependable localization in deep-sea or turbid environments where optical sensors fail.



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SIZE AND WEIGHT	
Array-body dimensions (without feet)	1750 x 1750 x 605 mm
Setup dimensions with feet	1820 x 1450 x 2033 mm
Transport	1041 x 1041 x 412 mm
Weight	Ca. 14 kg (without feet, cables, lines, data recorder)
FEATURES	
Materials	<ul style="list-style-type: none"> <li>• Seawater-resistant plastic</li> <li>• Anodized aluminum</li> <li>• Stainless steel fittings</li> </ul>
ARRAY DATA	
Channels	24
Frequencies to be mapped	Expected 1.5 - 20 kHz
Depth	Tested at 22 m
Max. underwater duration	10 hours
Min. measuring distance	2 m

