

GIB-LITE

High accuracy, easy to use, shallow water GPS driven underwater tracking system



The GIB-Lite offers an affordable solution to those users who need accurate sub-sea positioning inside a wide area (typically 500 m x 500 m).

By firstly using 4 small, light buoys, and secondly by combining some deck box electronics into the antenna assembly, ACSA has designed a system that is very easy to deploy and perfectly adapted for underwater positioning in calm conditions.

Key features & benefits

- 3D real-time tracking in **longitude and latitude** in D-GPS mode with a **metric accuracy**
- Real-time multi-mobiles capabilities
- Fast installation (< 1h)
- **No calibration**
- Real-time Quality Control
- Fully configurable
- Data storage for post processing (replay & recalculation)
- Easy to transport (system volume < 0.5 m³)

Applications

Mine warfare : EOD divers tracking and guidance system

Oil & Gas shallow water survey

Ocean science and underwater archaeology

Diver, ROV, AUV tracking

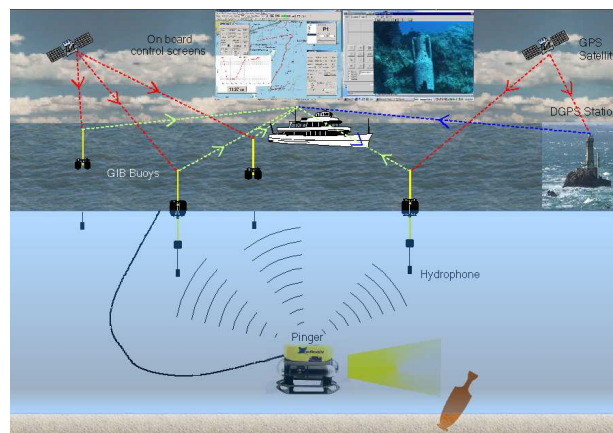
General Principles

Moor 4 buoys around the tracking area. Buoys detect acoustic signals coming from the pingers and date their time of arrival. They then send by local radio link these times and their GPS position to a Control & Display Unit (cf picture on left) installed onboard the mother ship. The Control & Display Unit process and display underwater tracks & buoys positions.



System hardware

- 4 Buoys
- 4 hydrophone with 10 m cables
- 1 Deck Unit composed of:
 - ✓ 1 Junction Box (Jbox)
 - ✓ 1 Aerial box
 - ✓ 1 PC with AQUATIC-STD software
- 1 pinger (32 or 37 kHz)



Performances

Positioning accuracy:	2 m @ 1 σ
Radio range:	1 km
Acoustic range:	1 km @ 32 & 37 kHz
Coverage area:	500m x 500m x 100 m depth
Number of mobiles	2 (by default) – up to 4 (optional)

Buoys Technical Data

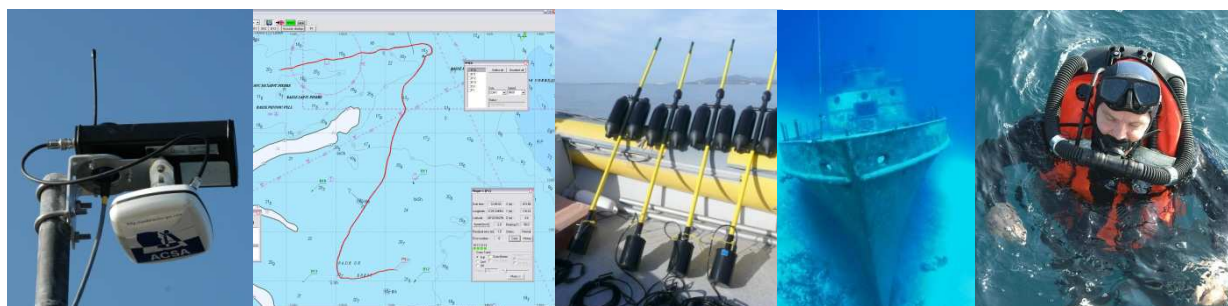
Radio modem	868 MHz / 900 MHz (license free)
Battery life:	8 hours
Size	2.5 m height – 33 cm width (1.25 m height when folded)
Weight	8 kg
GPS unit	Compatible with WAAS/EGNOS
Sea state	≤ 2

Asynchronous Pingers Technical Data

Battery life:	8 days (with primary batteries ref SL750)
Size:	23 cm long – 3 cm diameter
Weight:	300 g
Frequency	32 or 37 kHz
Depth rating:	100 m

Options

AQUATIC Expert	Software license (advanced functions for experts)
Local DIFF GPS	Instead of WAAS-EGNOS D-GPS
C-Map	License for the sea chart of a specific area
Synchronous mode	License + Additional Synchro box + Synchronous pingers
High accuracy (25cm)	Special pinger and software module (in addition to synchronous mode)



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ACSA Underwater GPS

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