

Gaps M5

Pre-calibrated USBL system

Gaps M5 is a Medium frequency Ultra-Short Baseline (USBL) positioning system for accurate location, positioning and tracking of subsea assets, from ultra-shallow water to medium water depths.

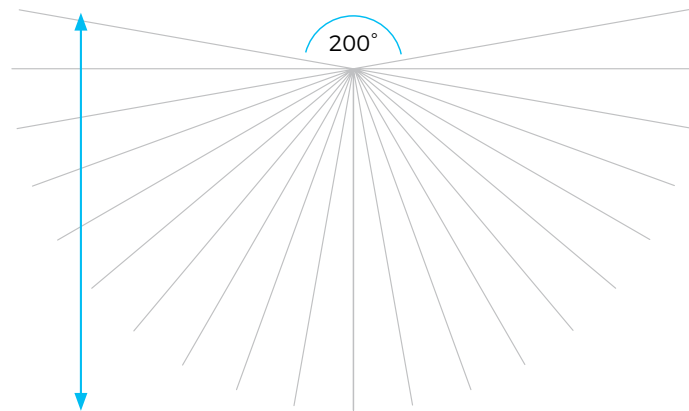
It combines an USBL integrated with a heading and attitude sensor based on iXblue FOG technology. Available in free of export version* and extended range version (Gaps M5-XR), Gaps M5 is a lighter and more compact version of Gaps.



Compatible with all Dynamic Positioning Systems

True horizontal tracking

From the surface...



... to medium water depths (995m)

USBL/LBL & Acoustic Communication

FEATURES

- 200° aperture: above horizontal tracking.
- Not subject to export restrictions*.
- Robust True North finding sensor.
- DP compatible LBL/USBL.
- Third-party transponder compatible.
- Acoustic communication (telemetry).
- 3D display software included (Delph Roadmap).

*According to the European export control regulation. Only valid for the Gaps M5 version.

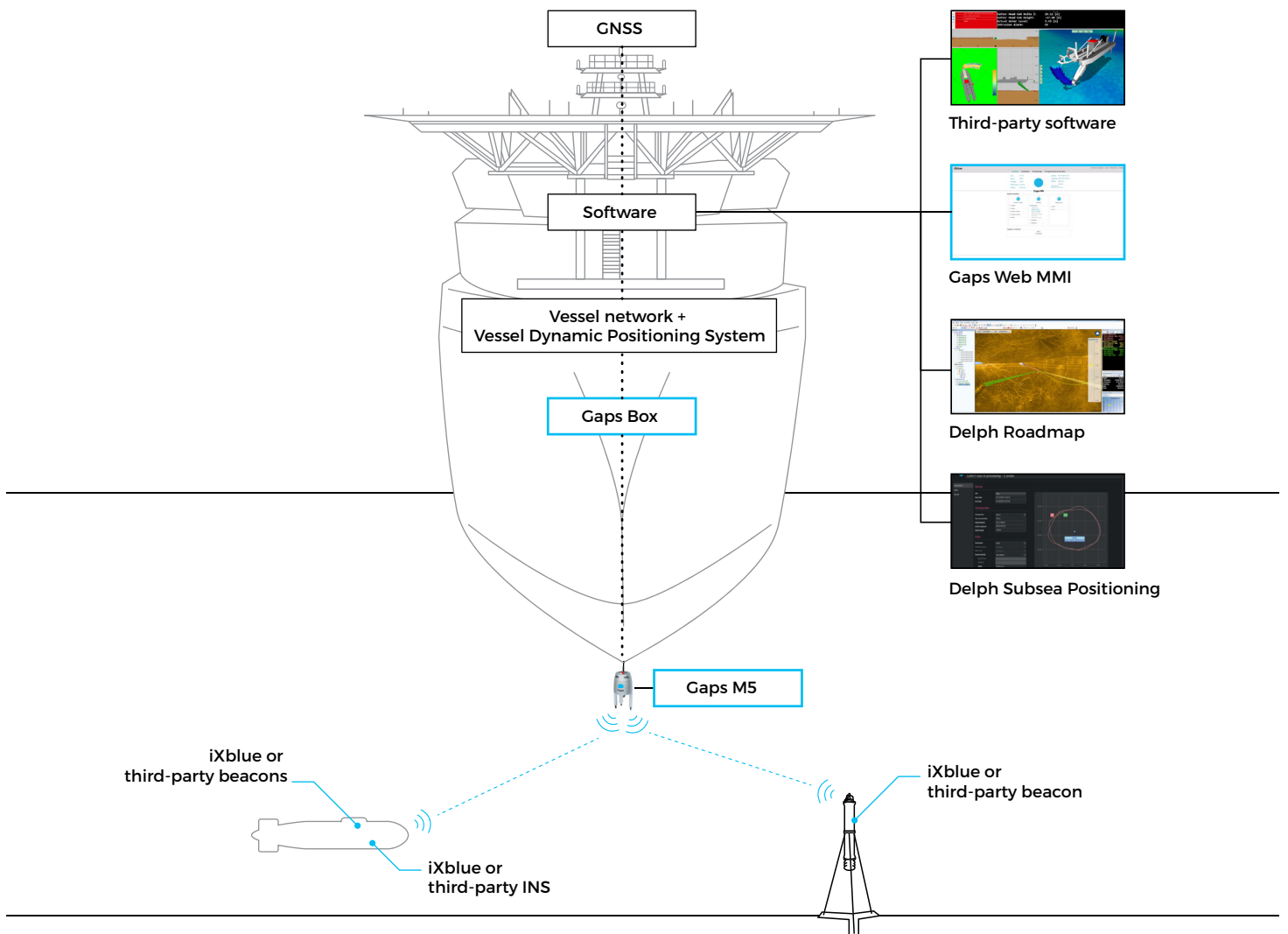
BENEFITS

- Calibration free.
- Shallow water and horizontal tracking.
- Accurate absolute positioning.
- Easy to install, operate and repair for cost-efficiency.

APPLICATIONS

- AUV tracking
- ROV tracking
- Tow fish tracking
- Diver tracking
- Dynamic positioning
- LBL Box-in
- Offshore construction

GAPS ECOSYSTEM



COMPATIBLE TRANSPONDERS



MT912
Mini transponder



ZTA02C
OBC transponder



MTBx2 OEM
Positioning and
Communication transponder

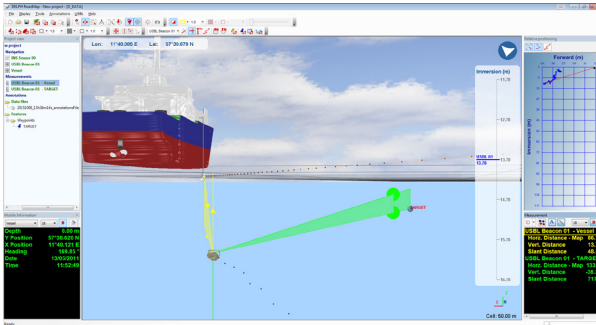


Canopus
Intelligent LBL transponder

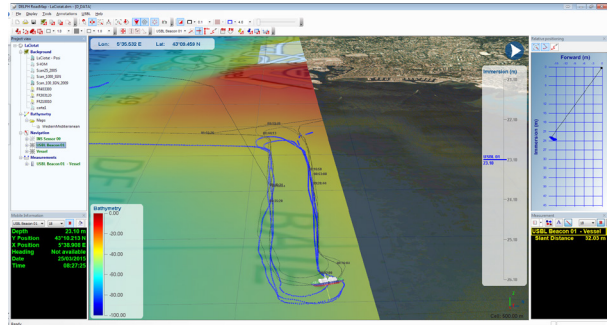
For third-party transponders compatibility: contact ixblue.
Compatible with all ixblue Oceano MF ranges and Canopus.

DELPH ROADMAP

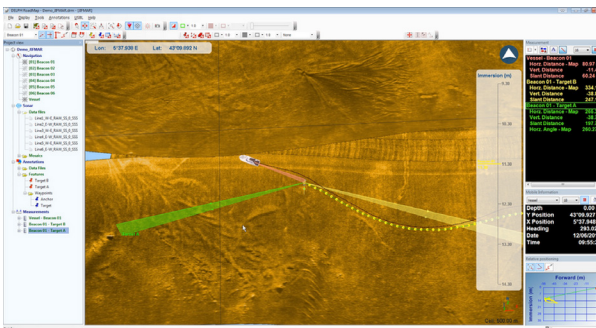
3D visualization software for real-time and offline display. Compatible with ixblue INS, acoustic systems and NMEA positioning devices.



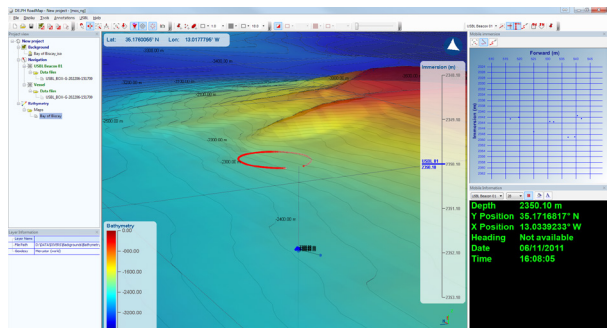
RT measurement between USBL and towed equipment



Tow-fish tracking



ROV tracking



USBL calibration

GAPS M5 TECHNICAL DESCRIPTION

Transceiver performance

Operating range*	995m with Gaps M5 4,000m with extended range version Gaps M5-XR
Acoustic coverage	200°
Acoustic precision	0.1 % of the slant range CEP50
Positioning accuracy**	0.2 % of slant range CEP50
Range accuracy	20 mm
Operational frequency	MF (20-30 kHz)

Embedded MRU

Type	Fiber-optic Gyrocompass
Heading	0.15 deg secant latitude (RMS)
Pitch & roll	0.1°
Settling time	5 minutes

Electrical

Power supply	230 VAC (50/60Hz) / 24-36 VDC
Consumption	22 W
Synchro IN	1 PPS ; 1 Trigger
Synchro OUT	2 TTL Pulses
Communication	4 Serial (RS232/422/485) 1 Ethernet (RJ45)

Environmental

Storage temperature	-40 to +70°C
Operating temperature	-5 to +35°C
Max. antenna deployment depth	25 m

Physical characteristics

Dimensions (Length x Diameter)	520.8 x 296 mm
Material	Carbon fiber painted
Weight in air /water	14 kg / -5 kg
Gaps cable length	20m (50m and 95m optional)

Interface unit (Gaps box)

Dimensions	233x330x94
Weight	4.6 kg
EMC	89/336/EEC - EN 60945

*: operating range depends on the conditions of measurement (NIS, SNR)

**: In vertical conditions. Including GPS error of 0.1m. Sound velocity profile compensated. Transponder transmit level = 191 ref $\mu\text{Pa}@1\text{m}$. Slant range of 900m. SNR>10dB