GAPS

Fourth-generation usbl acoustic positioning system

The **iXBlue** fourth-generation pre-calibrated **GAPS** combines high performance ultra-short baseline (USBL) and a fiber-optic inertial navigation system (INS) in the same housing to provide accurate position of any subsea object, in diverse and challenging environments. Its performance ranges from extremely shallow water to deep sea. Its compact and all-in-one design allows both portable and permanent installations. One of **GAPS** key new features is support of dynamic positioning (DP).

FEATURES

- Integrates USBL, high-grade INS, real-time positioning and GPS

- Position accuracy: 0.06% x slant range

- Advanced signal processing and 3D acoustic antenna for range and accuracy performance

- Powerful dynamic positioning (DP) mode (L/USBL/INS)

BENEFITS

- Cost- and time-saving deployment: flexible, portable, pre-calibrated, rapid, and simple

- Robust performance in very shallow water (10 m depth) to long range (**>** 4000 m depth)

- Deployment options, from surface buoy, side pole, moon pool or hull mounted

- Universal utilization

APPLICATIONS
- Offshore, AUV and ROV navigation • Underwater survey and inspection • Drilling
- Dynamic positioning (DP) • Structure placement • Pipeline and cable deployment
- Diver tracking • Seismic • Ocean science • Defense • Renewable energy industries

IXBLUE
DEEP INSIGHT. SHARPER SENSES.

GAPS
TECHNICAL SPECIFICATIONS

PERFORMANCE

Subsea positioning

Position accuracy (CEP50)	0.06 % of the slant range [1]
Nominal range	4 000 m [2]
Antenna coverage	200 deg hemispherical

Surface positioning

Heading accuracy	0.01 deg x secant latitude
Roll / pitch accuracy	0.01 deg

COMPATIBLE TRANSPONDERS AND SENSORS

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iXBlue mini transponders	OCEANO MT8 x 2, OCEANO MT9 x 2, OCEANO MTA x 2
iXBlue midi transponders	OCEANO ETA62 and releasable OCEANO RTA62
Third party wide band transponders	Optional
iXBlue inertial-acoustic solution integration	PHINS, ROVINS, RAMSES

OPERATING / ENVIRONMENT / MECHANICAL

Power supply / consumption	24 – 36 VDC or 110 – 230 VAC / 50 W
Weight in air / water	15 kg / -7 kg (positive buoyancy)
Dimensions (Ø x H)	295 mm x 638 mm
Array depth rating	20 m (100 m survival)
Operating / storage temperature	-5°C to 35°C / -40°C to 70°C

INTERFACES

Control command	Standard iXBlue web-based user interface
Input / output	Quad RS232 / RS485 / Ethernet
	Trigger I/O pulse port and PPS / Sync ports
Protocols	Library of NMEA protocols (standard telegrams for all DPs)
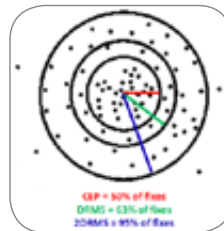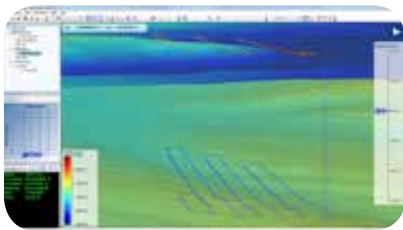
1 signal to noise ratio **>** 40 dB, in vertical conditions
2 noise level **<** 65 dB / √Hz @ 1 m ref µPa