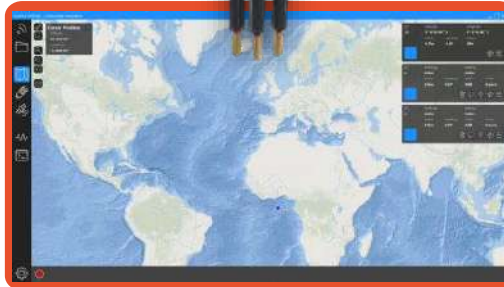


SeaTrac Micro-USBL



Underwater Tracking and Messaging



SeaTrac Micro-USBL Tracking & Data Modems are capable of simultaneously tracking the positions of assets underwater and undertaking bi-directional data exchange with them. These small, budget-friendly modems can communicate at ranges up to 1 km underwater.

One X150 modem is mounted on the supervisor vessel and connected to a PC running NavPoint. Fourteen X010 and X110 modems can be tracked simultaneously and, optionally, subsea assets may use the data port to provide periodic acoustic communications with other systems and sensors. In this mode, the position of each modem may be broadcast to others in the network.

Integrated beacon sensors (such as depth, attitude and supply voltage) may also be remotely queried by the interrogating X150 at the surface.



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Subsea Applications

- Multi-beacon tracking system (for small to medium ROVs, AUVs, divers, etc.)
- Remote control and interrogation of subsea equipment
- AUV/Diver telemetry links
- Remote depth, attitude, and orientation measurement
- Real-time data output to other NMEA compatible systems

PRODUCT SPECIFICATION

Acoustic

Ranging	Yes	Yes	Yes
Positioning (USBL)	Yes	No	No
Acoustic Range	1km radius horizontal, 1km vertical (hemispherical)		
Range Resolution	±0.1m (dependant on provided VOS accuracy) *		
Angular Resolution	typ 2% of Acoustic Range * (-±1°)	N/A	N/A
Velocity-of-Sound Range	1300ms ⁻¹ to 1700ms ⁻¹ (can auto-compute from water temp & depth)		
Beacon Velocity	Active Doppler compensation, up to 15kts (28kph)		
Communications	Broadband spread spectrum encoding, 24-32kHz, 100 baud. Multi-tiered Acoustic Protocol Stack.		
Targets (Addressing)	15 unique beacon identifiers, broadcast to all capability. Allows up to 14 targets to be tracked from a single X150 USBL beacon.		



	SeaTrac X150 <i>BP00795</i>	SeaTrac X110 <i>BP00843</i>	SeaTrac X010 <i>BP00977</i>
Mechanical			
Length	132mm (5.2") exc con 160mm (6.3") inc con	106mm (4.2") exc con 134mm (5.3") inc con	74mm (2.9")
Diameter	54mm body, 59mm cage		
Weight	720g in air 530g in water	690g in air 500g in water	300g in air 170g in water
Depth Rating	100m, 300m, 1000m, 2000m		300m
Construction	316 Stainless Steel and Black ABS plastic		
Operating Temp Range	-5°C to +40°C (23°F to 104°F)		

