

USBL-P300

Compact Ultra-Short Baseline

Underwater Positioning & Acoustic Communication



Overview

The USBL-P300 is a next-generation, high-precision subsea tracking and data interaction solution designed specifically for ROVs, AUVs, underwater vehicles, and complex marine operations. Integrating advanced acoustic positioning with wireless data communication, the USBL-P300 breaks the barriers of challenging underwater environments. With its ultra-compact form factor and plug-and-play deployment, it delivers high-accuracy guidance and multi-target tracking without complex configurations, significantly cutting down operational setup times and labor costs for commercial maritime projects.

Key Applications

- **Compact & Lightweight Design** – Mini compact structure, compatible with ROV, AUV and various subsea operation devices for all marine scenarios
- **Rapid & Flexible Deployment** – Soft-tether mounting for plug-and-play use without complicated calibration, easy single-person setup
- **High-Precision Positioning** – Direction accuracy of 1.5° and ranging accuracy of 1% D±0.3 m for precise navigation and operational safety
- **360° Omnidirectional Coverage** – Full horizontal and vertical coverage within 300m to eliminate blind zones and unstable signal in complex waters
- **Integrated Positioning & Comm** – 500bps communication rate and 4s position refresh for synchronous data & command transmission without manual mode switching
- **Underwater Mesh Networking** – Supports synchronous multi-device data and command routing without mode switching

Safety & Automatic Return Functions

- Commercial & Engineering Diving
- ROV & AUV Navigation
- Public Safety & Search and Rescue
- Marine Scientific Research & Archaeology

Technical Specifications

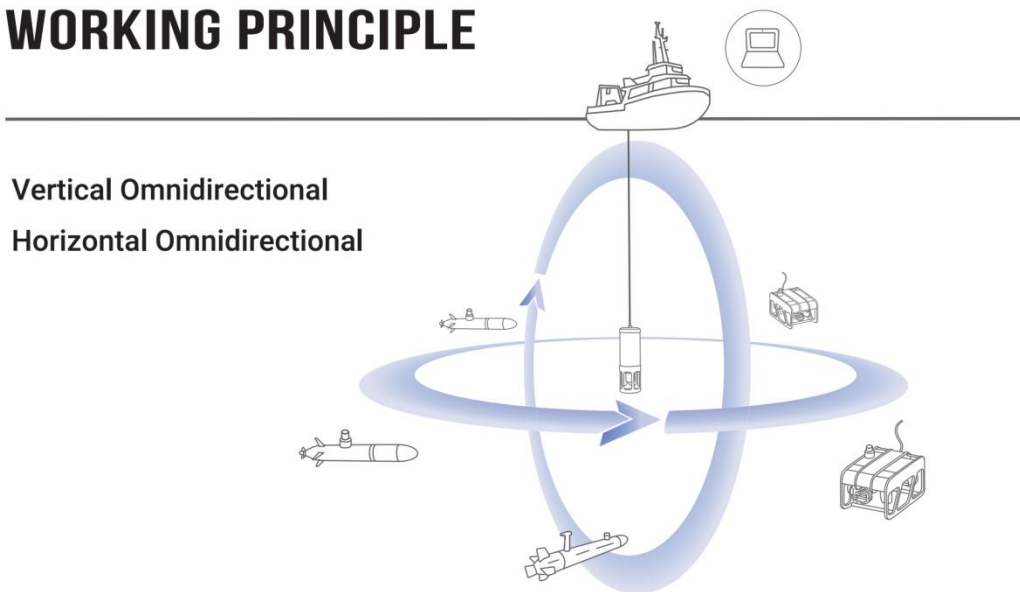
USBL-P300 System Parameters	
Positioning & Communication Range	300m
Operating Frequency	30-40kHz
Allowable Moving Speed	3 knots
Angle Coverage	Horizontal & Vertical Omnidirectional
Array Deployment Method	Soft tether suspension, ready-to-use after submersion
Ranging Accuracy	1%D±0.3m
Direction Finding Accuracy	±1.5°
Position Refresh Interval	4s
Communication Baud Rate	500bps
Max Tracking Targets	5
Input Voltage	12V
Operating Temperature	0℃ ~ 55℃
Storage Temperature	-20℃ ~ 75℃

USBL-P300-SIO Array Parameters	
Dimension	Diameter × Height: 82 × 262 mm
Main Material	316L Stainless Steel
Communication Interface	RS-485 / RS-232
Cable Length	20m (Customizable)
Weight	2650g (Excluding cable)
Max Working Depth	300m

USBL-P300-U20 Transponder Parameters	
Dimension	Length × Width × Height: 107 × 64 × 43 mm
Main Material	Aluminum Alloy
Communication Interface	RS-485 / RS-232
Power Supply Mode	External power / Built-in battery
Underwater Weight	210g
Max Working Depth	300m

360° Omnidirectional

WORKING PRINCIPLE



Dimensions

