SATLAB GEOSOLUTIONS

HydroBeam M4

Portable Multibeam Echo Sounder



HydroBeam M4

The HydroBeam M4 is an ingenious and compact portable multibeam bathymetric system, brought to life by SatLab. It boasts exceptional precision without the need for frequent calibration, making it an ideal choice for lightweight operations.

Its compact design, coupled with its intelligent features and circular transducer, renders it effortlessly deployable on a range of platforms, including USVs, AUVs, and ROVs. This versatility empowers users to swiftly conduct precise measurements at any location and time, liberating them from the constraints of traditional multibeam systems. Moreover, it ensures the dependable and stable operation of unmanned missions across diverse environments, from serene lakes and meandering rivers to bustling harbors, ports, terminals, and intricate waterways.

System Composition



Size

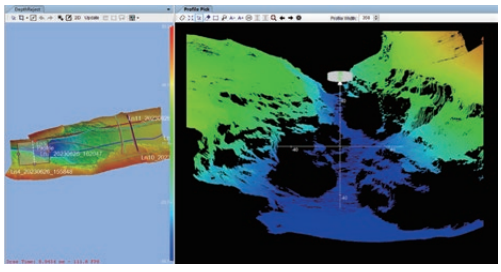


Air Weight: 5.9 kg

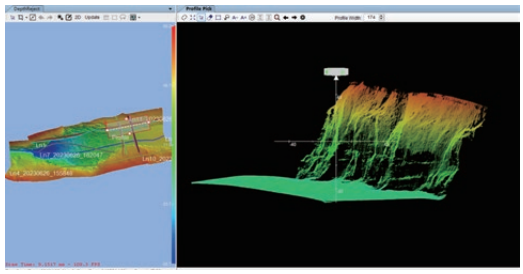


Air Weight: 2.6 kg

Results



Deep-water Survey



Steep Topographic Survey

Advanced Features

Diverse Compatibility

The compact cylindrical shape of Φ228mm and lightweight design of 5.9kg makes it easily compatible with varous unmanned platforms, and ease in transport and deployment in various settings.

Reliable Performance

Supports up to 1024 high-density beams with resolutions up to 7.5 mm , maintaining high performance and accuracy across different tasks and conditions.

Real-time Roll Stabilisation

Real-time Roll stabilisation maximises the multibeam sweep and improves work efficiency.

Seamless Integration

Built-in INS and SVS in the transducer, eliminating complex attitude calibration , simplifying setup and reducing downtime.

High Efficiency

Adjustable scan width from 8° to 150° for up to 7.5x depth coverage , reducing survey repeats and increasing overall efficiency.

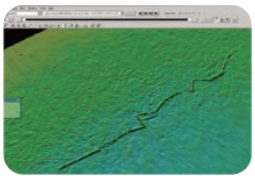
Intelligent Operation

Functional and smart survey software allows operators to monitor survey progress and reduces manual operation, and supports access to Kongsberg, R2sonic, Reson and other devices.

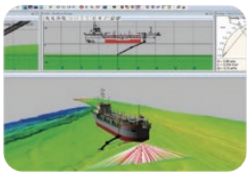
Strict Compliance with Standards

Exceeds IHO special order, CHS exclusive order & USACE New Work.

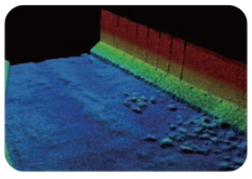
Applications



Pipeline Survey



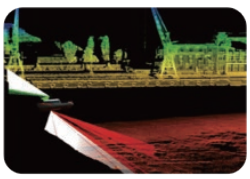
Dredging Project



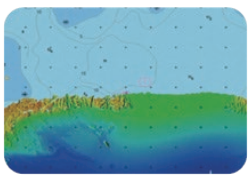
Hydrographic Survey



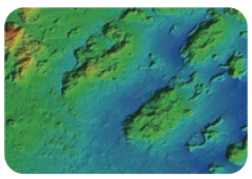
Underwater Archeology



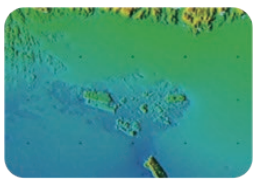
Harbor Survey



Reservoir Storage Survey



Environmental Research



Rescue and Salvage

Specification

Frequency	400 Khz
Beam Width	1° * 2°
Number of Beams	512(max 1024)
Swath Coverage	8°-150°
Sounding Range	0.2-300 m
Resolution	7.5 mm
Work Modes	Equal-angle/Equal-distance/High density
Max Ping Rate	30 HZ
Signal Type	CW
Depth Rating (Sonar Head)	50 m
Roll Stabilization	±10°
Built-in Heading Accuracy	0.08°(2 m base line); 0.05°(4 m base line)
Built-in Attitude Accuracy	0.02°
Position Accuracy	H: ±8 mm+1 ppm; V: ±15 mm+1 ppm
Sounding Accuracy	2cm or 0.1% range
SVS Accuracy	±0.02 m/s
SVS Resolution	0.001 m/s
Sound Velocity Range	1375~1900 m/s
Input Voltage	AC: 110-240V; DC: 10-32V
Power Wastage	60W
Transducer Dimension	Φ228 mm*175 mm
Transducer Weight	5.9 kg(air)
Deck Unit Dimension	230 mm*180 mm*80 mm
Deck Unit Weight	2.6 kg(air)
Operational Temperature	+4°C~+40°C
Storage Temperature	-20°C~+60°C

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