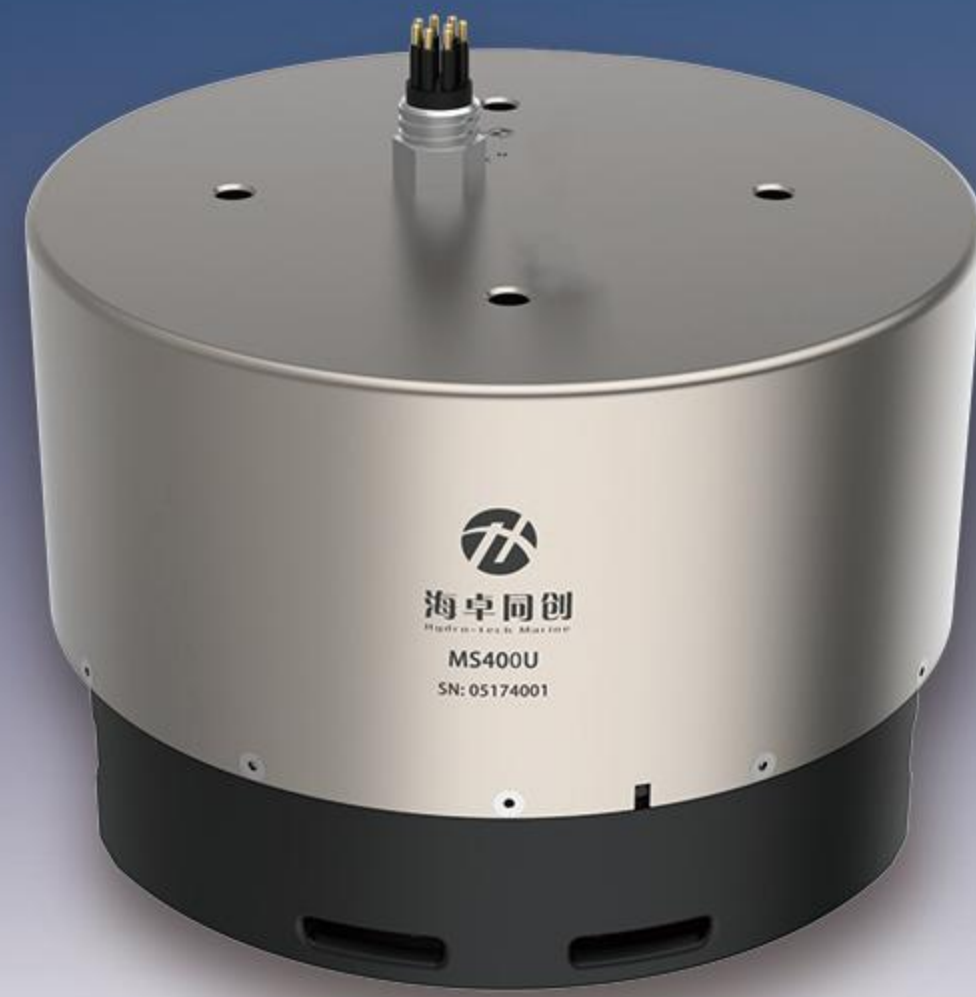


MS400U (All-in-One)

Multibeam Echo Sounder



Highly Functional Integration

Integrate high-precision satellite positioning system, attitude & heading IMU and sound velocity sensors, which can realize non-calibration underwater terrain survey and provide bathymetric information to USV.



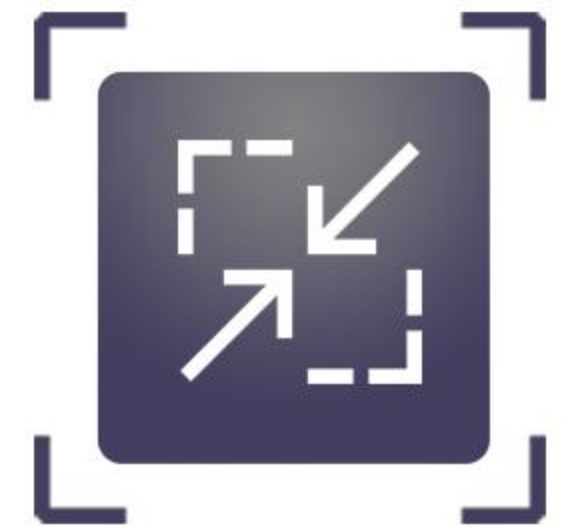
Full Automatic Non-calibration

Automatic measurement without adjustment and manual intervention is suitable for all kinds of unmanned platform integration applications.



Low Consumption Light Weight

Power Consumption is least 80W Weight around 7.5kg. Easy to install. Suitable for ROV/AUV/USV to underwater terrain surveying.



Extension Functions

Independent and extensible network interface. It can work together with side scan sonar, ADCP & 3D laser scanning system or other sensor.

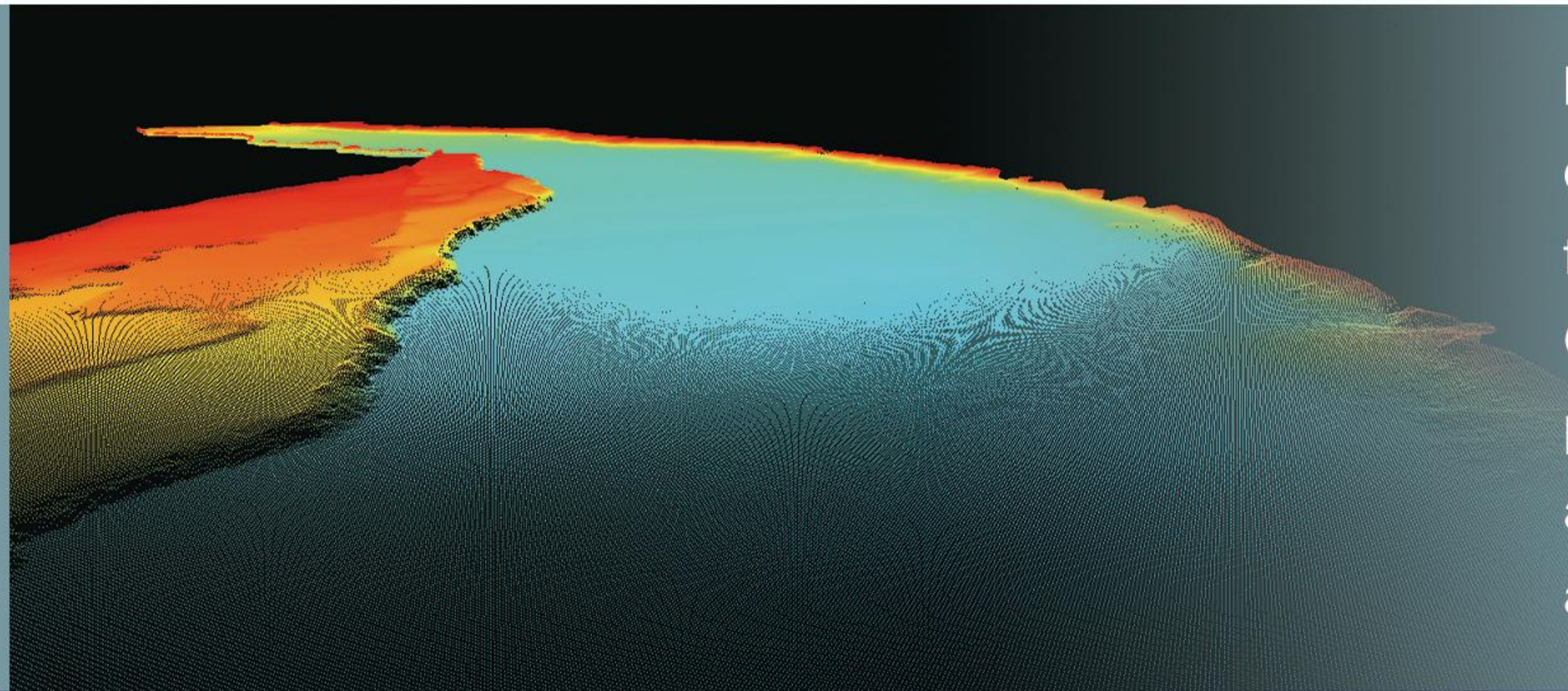


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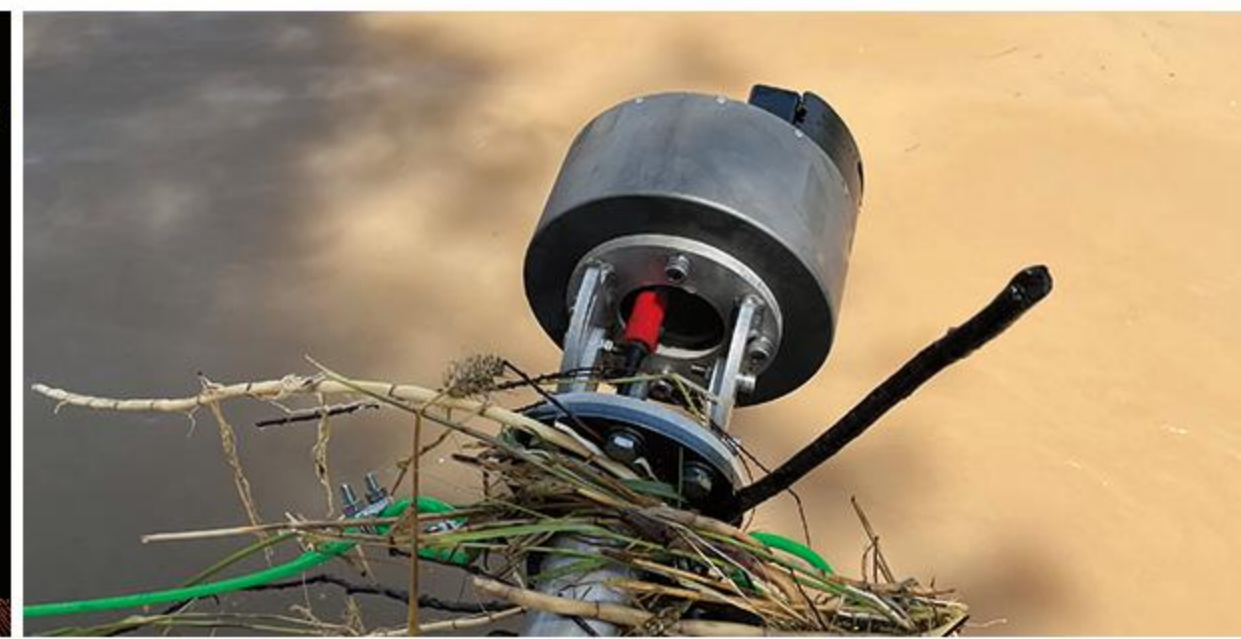
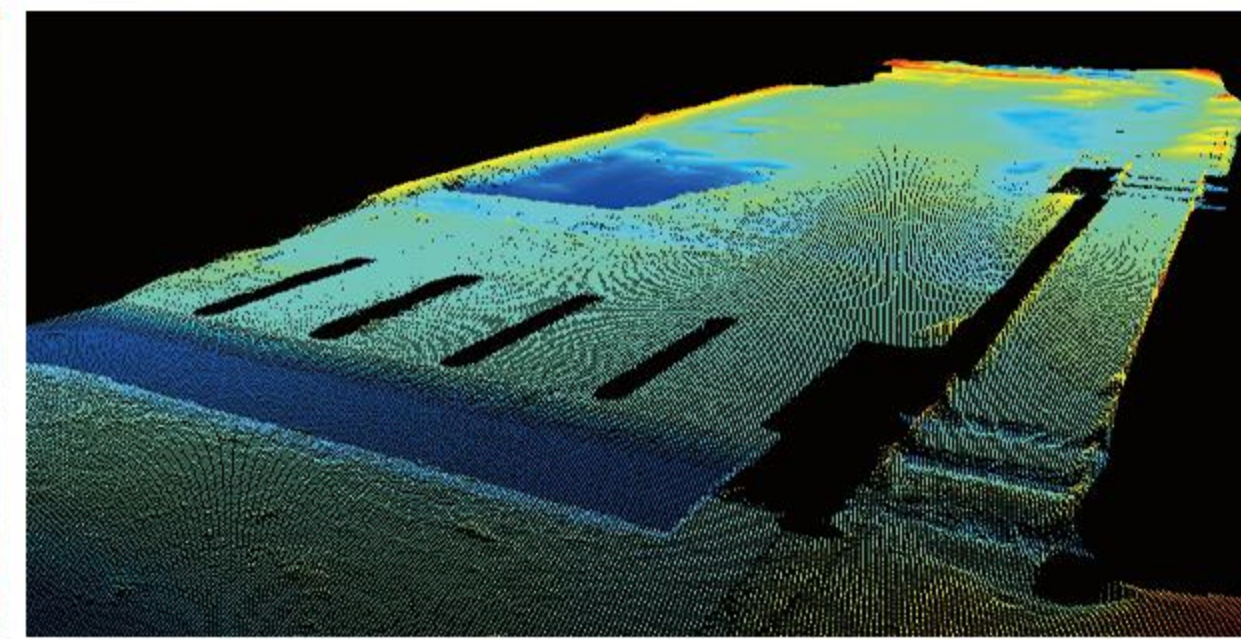
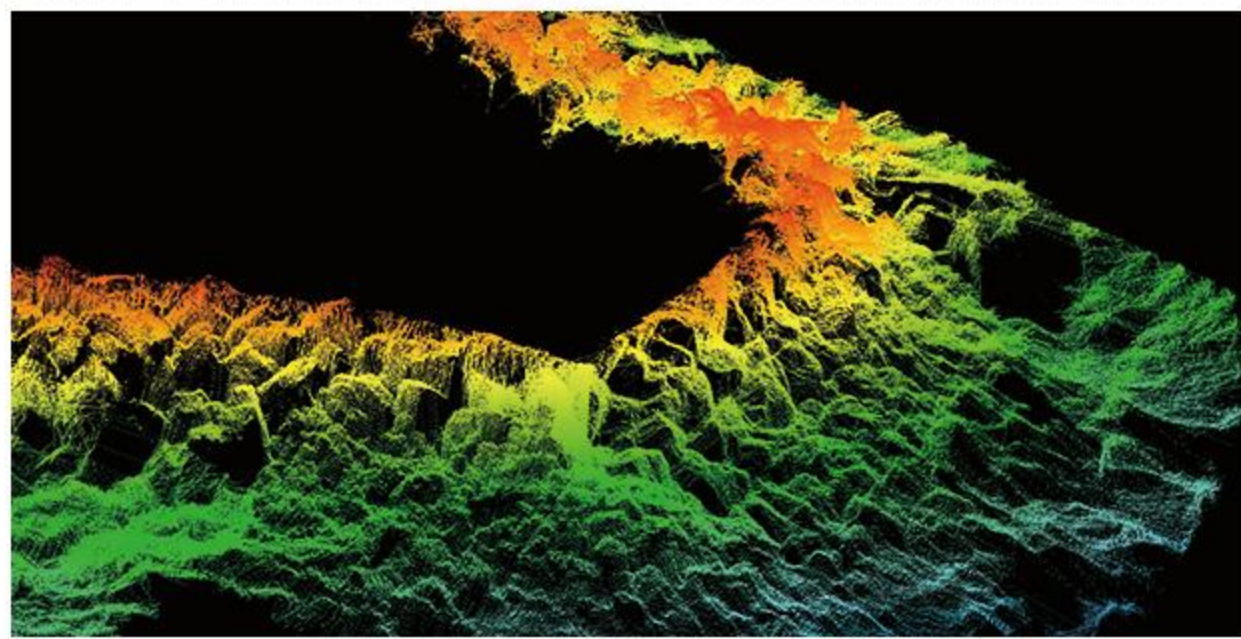


Learn More

MS400U (All-in-One) Multibeam Echo Sounder



MS400U is a compact multibeam echosounder specially designed for the integration of small USV or other uncrewed platforms. It has built-in sound velocity sensor, IMU sensor and GNSS module. The features of small size, light weight and low power consumption are quite suitable for integration to any autonomy platform. Its functions and performance is perfect for any hydrographic surveying requirements.

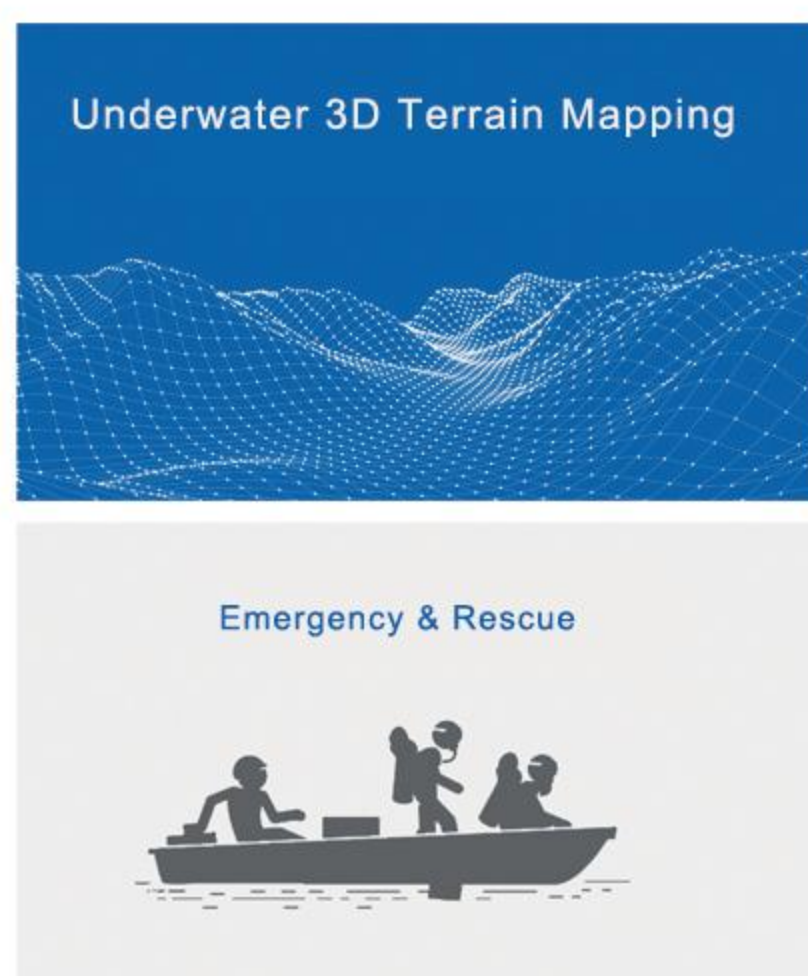


Recommendations

- Small USV integration with multibeam echo sounder for bathymetric survey in river, reservoir and lake.
- Upgrade vessel-mounted ADCP with multibeam echo sounder to high performance hydrographic application.
- Install on surface vessel and USV for underwater terrain mapping.



Applications



Technical Specifications

| | |
|-------------------------|---------------------------|
| Working Frequency | 400kHz |
| Number of Beams | 512 |
| ACross Track Beam Width | 1° |
| Along Track Beam Width | 2° |
| Swath Coverage | 143° |
| Sounding Depth | 0.2-200m+* |
| Depth Resolution | 0.75cm |
| Max Ping Rate | 60Hz |
| Sounding Mode | Equiangular / Equidistant |
| Signal Type | CW/Chirp |
| Pulse Width | 30µs – 8ms |
| Max Working Depth | 50m |

* Depending on environmental conditions.



Features

| | |
|------------------------------|-----|
| Near Field Focusing | Yes |
| Bottom Tracking | Yes |
| Water Column | Yes |
| Real-time Roll Stabilization | Yes |
| Muddy Water Survey | Yes |
| Auto Survey | Yes |



Physical Specifications

| | |
|---------------------|-------------------------|
| Transducer Size | φ220 × 184mm |
| Transducer Weight | 7.5kg |
| Deck Unit Size | 200 × 145 × 91mm |
| Deck Unit Weight | 2.15kg |
| Working Temperature | -2°C~40°C |
| Storage Temperature | -20°C~55°C |
| Power Supply | DC 10-32V / AC 110~240V |
| Power Consumption | 80W |



Software

| | |
|---------------------------------------|------------------------------|
| Display & Control Software | HydroQuest |
| Navigation & Data Collection Software | HydroNavi |
| Compatible with | Hypack, Qinsy, BeamworX EIVA |



Auxiliary Sensors

| | |
|-------------------------|------------------------|
| Sound Velocity Sensor | SVS1500M (Built-in) |
| Sound Velocity Profiler | SVP1500 (Optional) |
| IMU Sensor | POS25(Built-in) |
| GNSS Module | Trimble GNSS(Built-in) |



Positioning & Attitude Specifications

| | |
|-------------|---|
| Positioning | 0.5 - 2m (DGPS) / 10cm (PPP) / 8mm+1ppm (RTK) |
| Attitude | 0.03° (RTK) / 0.025° (Post Processing) |
| Heading | 0.06° (4m baseline) / 0.08° (2m baseline) |
| Heave | 5cm or 5% Range / 2cm or 2% (TrueHeave) |

**All specifications are subject to change without notice.

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