

Specifications

Sonar Specifications

|                       |                                              |
|-----------------------|----------------------------------------------|
| Operating Frequency   | 150 ~ 450kHz<br>500k, 600k, 700kHz           |
| Number of Beam        | 1024                                         |
| Cross Track Beamwidth | 0.6°@700kHz(Optional)<br>1°@400kHz/2°@200kHz |
| Along Track Beamwidth | 1.2°@700kHz(Optional)<br>2°@400kHz/4°@200kHz |
| Swath Coverage        | 143°                                         |
| Depth Range           | 0.2 ~ 350m+*                                 |
| Depth Resolution      | 0.75cm                                       |
| Max Ping Rate         | 60Hz                                         |
| Sounding Mode         | Equiangular / Equidistant                    |
| Signal Type           | CW/Chirp                                     |
| Pulse Width           | 30us ~ 8ms                                   |
| Depth Rating          | 50m                                          |

Key Features

|                              |           |
|------------------------------|-----------|
| Near-Field Focus             | Supported |
| Bottom Tracking              | Supported |
| Water Column Imaging         | Supported |
| Real-time Roll Stabilization | Supported |
| Muddy Water Bathymetry       | Supported |

INS/GNSS Specifications

|                         |                                                                            |
|-------------------------|----------------------------------------------------------------------------|
| Model                   | POS-15                                                                     |
| Heading Accuracy        | 0.015°,4 mBaseline<br>0.03°,2 mBaseline                                    |
| Pitch/Roll Accuracy     | 0.02°(RTK)<br>0.015°(PPK)                                                  |
| Heave Accuracy          | 5cm,5%Real time,2cm,2%(TrueHeave)                                          |
| Horizontal Position     | ±8mm+1ppm(RTK,PPK),10cm(Satellite station differential,PPP),0 . 5~2m(DGPS) |
| Auxiliary Position Data | 1. Qianxun RTK,CORS Support 2. PPK PP-RTX Supported                        |

\*Above Specifications are related to Survey Environment

Mechanical Specifications

|                     |                           |
|---------------------|---------------------------|
| Sonar Dimension     | φ220mm x 184(148+36)mm    |
| Sonar Weight        | 7.6KG                     |
| Topside Dimension   | 200 × 145 ×97mm           |
| Topside Weight      | 2.15kg                    |
| Operating Tempature | -2 ~ 40℃                  |
| Storage Temperature | -20℃ ~ 55℃                |
| Power Supply        | DC 10 ~ 32V/AC 110 ~ 240V |
| Consumption         | 60W~800W                  |
| Cable Length        | 8m(Optional15m/30m)       |

Software Options

|                             |                                                 |
|-----------------------------|-------------------------------------------------|
| Acquisition                 | HydroSurvey2024                                 |
| Third Party Post Processing | Hypack, Qimera, EIVA, BeamworX<br>Hypack, Qinsy |
| Third Party Acquisition     | EIVA, BeamworX<br>Caris                         |

Hardware Options

|      |                   |
|------|-------------------|
| SVS  | Built-in SVS1500M |
| SVP  | Optional SVP1500  |
| INS  | Optional POS15    |
| GNSS | Optional POS15    |



◀ Learn More

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Features 700kHz Ultra High Operating Frequency

MS400UW

Wideband Multi-frequency Multibeam Echo Sounder

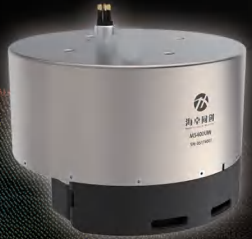


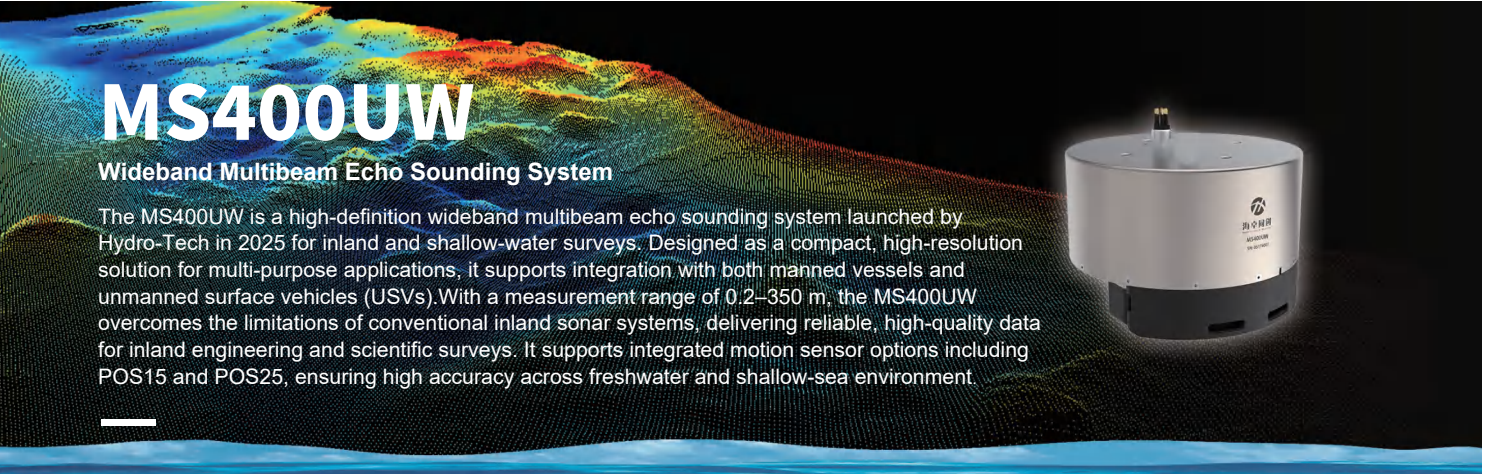
Beijing Hydro-Tech Marine Technology Co.,Ltd.

# MS400UW

## Wideband Multibeam Echo Sounding System

The MS400UW is a high-definition wideband multibeam echo sounding system launched by Hydro-Tech in 2025 for inland and shallow-water surveys. Designed as a compact, high-resolution solution for multi-purpose applications, it supports integration with both manned vessels and unmanned surface vehicles (USVs). With a measurement range of 0.2–350 m, the MS400UW overcomes the limitations of conventional inland sonar systems, delivering reliable, high-quality data for inland engineering and scientific surveys. It supports integrated motion sensor options including POS15 and POS25, ensuring high accuracy across freshwater and shallow-sea environment.





Features



Selectable Frequency

150-450kHz frequency agility. 500, 600, and 700kHz three high frequency modes for precise object detection such as inland reefs, sediment layers, hydraulic structures, etc.



Automated Parameters

- Automatic control of
- Power and gain
- Pulse width
- Signal mode
- Gate and range.



Compact & low power consumption

Designed for easy integration with USVs and other unmanned platforms.



Multi-applications

- Reservoir survey
- Inland waterway Dredging Monitoring
- Bridge pier foundation inspection
- Lake ecological survey
- Hydraulic engineering site investigation
- Scientific research

Applications



Inland waterway dredging monitoring



Inland reservoir bathymetric mapping & bridge pile foundation inspection

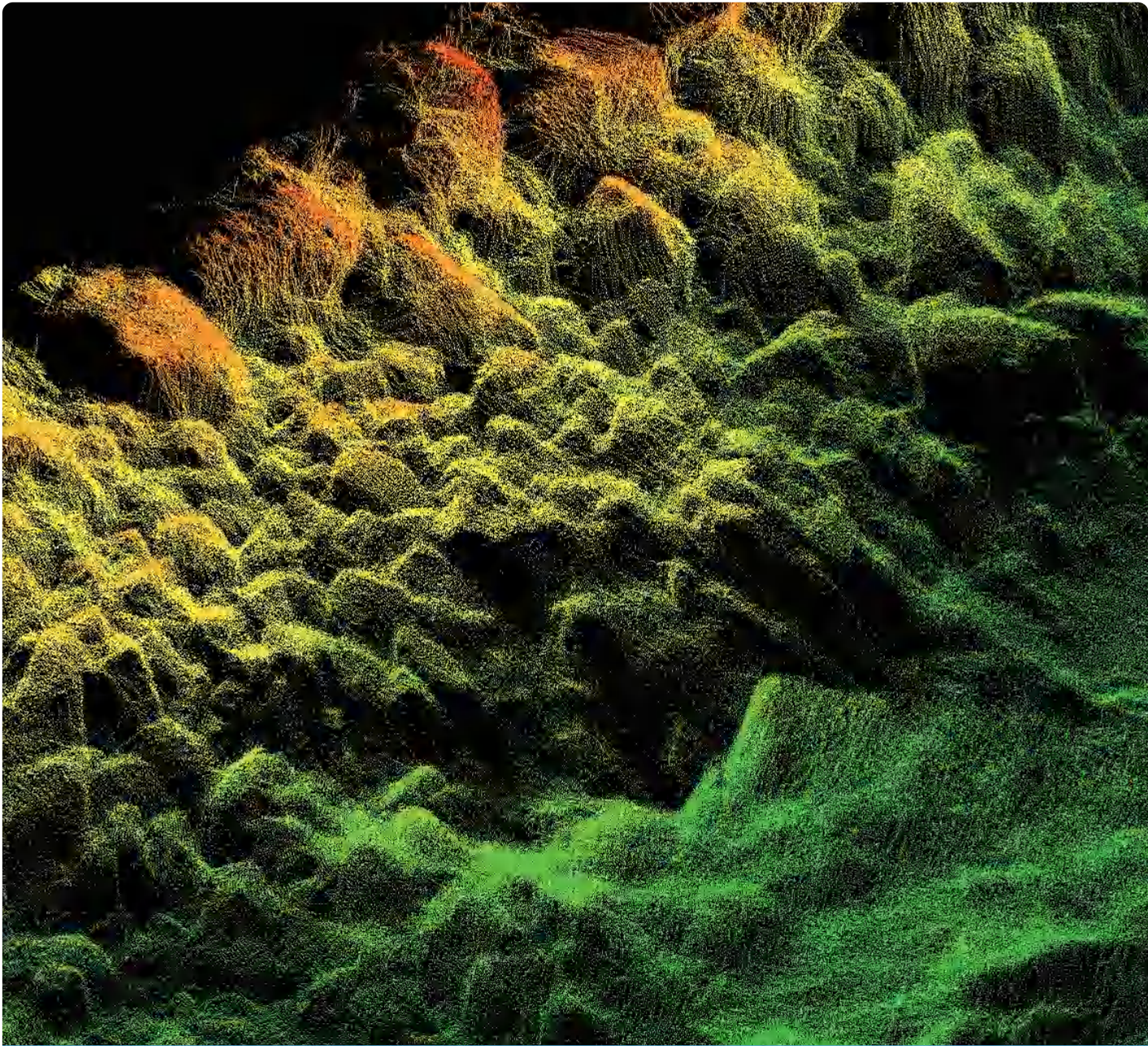


Lake ecological surveys



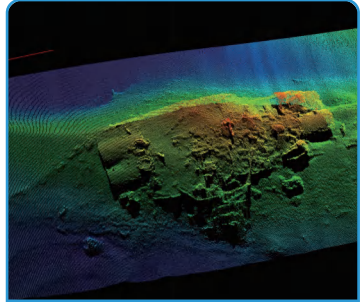
Hydraulic engineering site investigations and scientific underwater terrain research

Case Studies

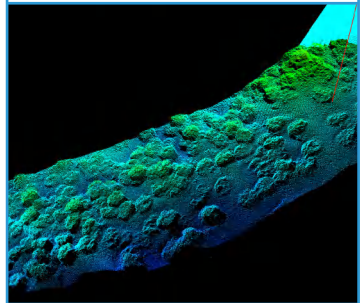


Breakwater Condition Investigation

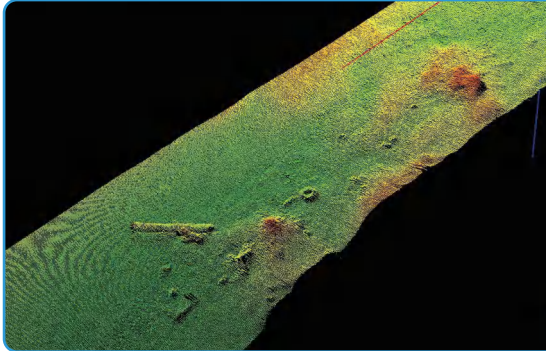
Case Studies



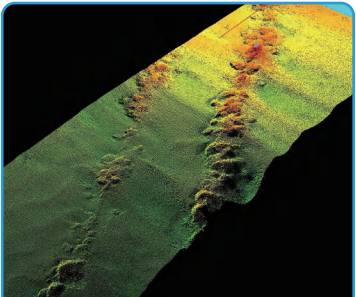
Sunken Wreck Detection



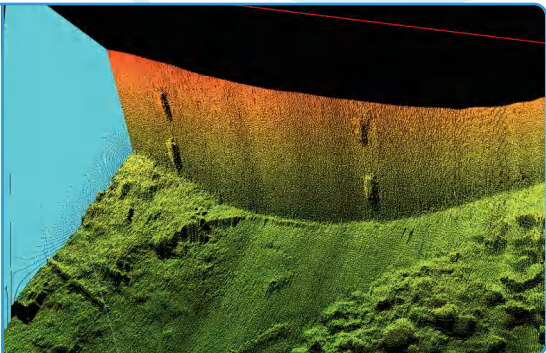
Navigation Channel Terrain Inspection



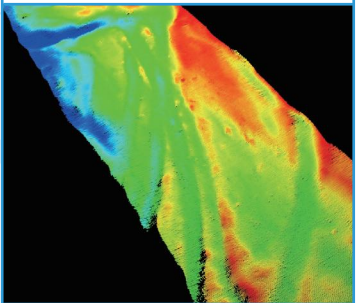
Large-Area Seabed Terrain Survey



Seabed Terrain Scanning



Subsea Cable Survey



Underwater Topographic Survey