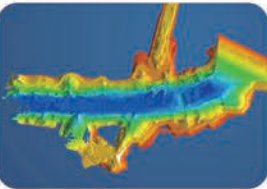


System Extension

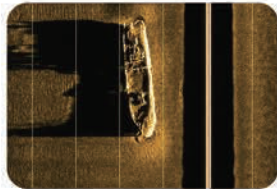
Multiple applications,available for one or several sonar instrumentations at the same time such as singlebeam echosounder,multibeam echosounder,side scan sonar,ADCP,water quality analyzer,water quality sampling box,etc.



Applications



Underwater topographic surveying



Underwater landscape surveying



Hydrographic surveying



Water quality monitoring

Technical Specifications

| | | |
|---------------------------------|-------------------------|--|
| Hull Parameters | Dimensions | 1800mm×840mm×480mm |
| | Weight of base boat | 30KG |
| | Hull material | Kevlar & carbon fiber high-strength composite |
| | Boat shape | Trimaran design,low barycenter,small resistance,stable sailing |
| | Anti-wave&wind | 5th wind level and 3rd wave level |
| Power and Electrical Parameters | Battery endurance | 6 hours at 2m/s (Optional high-capacity battery for 10 hours above) |
| | Top speed | 3.5m/s |
| | Propulsion | Brushless DC outdrivers |
| | Propeller type | One primary and two assistant propellers with ducted design |
| | Direction control | Veering without steering engine and sailing reversely |
| Safety Guarantee | Obstacle-avoiding | Automatic ultrasonic obstacle-avoiding |
| | Video | Transmission in real-time |
| | Auto-return | Auto-return while low battery or dropped signal |
| Ashore Base | Operating system | Supporting Windows and Android(Laptop or pad available depending on necessity) |
| | Communicating mode | RF point to point in real-time |
| | Transmission distance | Wireless bridge 2km (5Km、 10Km、 15Km optional) |
| Intelligent Controller | Navigation mode | Manual or autopilot,switchover at any time |
| | Communicating mode | RF point to point in real-time |
| | Reacting distance | 2Km |
| Sounding Performance | Waterproof grade | IP65 |
| | Function | Work mode switch in real-time, basic information display of USV in real-time,velocity and direction control of USV |
| | Work frequency | 200KHz |
| | Beam angle | 5°±0.5° |
| Location Accuracy | Sounding range | 0.15~300m |
| | Sounding resolution | 1cm±0.1h (h=depth) ,1cm depth resolution |
| | RTK | Horizontal : ±8mm+1ppm RMS Vertical : ±15mm+1ppm RMS |
| | Beacon (optional) | 0.5m (18) |
| System Software | SBAS | 1.0m CEP |
| | Hull control system | Autopilot,hull parameter control,coordinate conversion and etc. |
| | HiMAX sounding software | Supporting parameter configuration,coordinate conversion,depth location collecting,post-processing (simulative depth and digital depth combined for conveniently judging false depth) ,sampling feature point randomly,RTK and tide document for tidegauging,multiple data formats for consequence output and etc. |

Descriptions and specifications subject to change without notice.

Hi-Target AUTHORIZED DISTRIBUTION PARTNER

Hi-Target Surveying Instrument Co., Ltd.

ADD: Building 13, Tian'An Technology Zone HQ Center, No. 555, the North of Panyu Rd, Panyu District, 511400 Guangzhou, China.
TEL: +86 20 2288 3944 E-mail: info@hi-target.com.cn www.hi-target.com.cn

HI-TARGET
Surveying the World, Mapping the Future.

iBoat BMI Intelligent Surveying USV

- Stable trimaran design with ducted propellers
- Available for multiple sonar instrumentations
- Video transmission and obstacle avoidance
- Digital and simulative echo signals combined



©2017 Hi-Target Surveying Instrument Co., Ltd. All rights reserved.

System Introduction

Our intelligent USV—iBoat BM1 is designed to trimaran with the advantages of low barycenter,small resistance,stable sailing and etc.The hull propellers are driven by brushless DC motor while the ducted design protects it from aquatic plants and twining of fishing net.

Various kinds of sonar instrumentations can be installed on iBoat BM1 such as singlebeam echosounder,multibeam echosounder,side scan sonar,ADCP,water quality analyzer,water quality sampling box,etc.

It's widely used in underwater topographic surveying or hydrologic surveying in areas such as river,channels,harbors and reservoirs especially for common or emergency water quality sampling,water quality monitoring,hydrographic surveying,pipe detecting and etc.

System Composition and Features

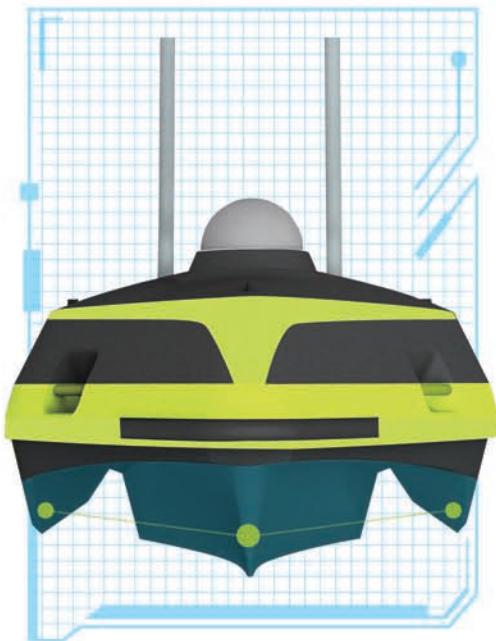
Professional hull design,high-performance sounding module,high-accuracy location module.Controlling,collecting and processing softwares are all independently designed and researched by Hi-Target.High integration and outstanding holistic performance adding perfect after-sales service provide you with one-stop service.

Hull Structure

Trimaran design shape
High anti-wave performance
Stable enough for sailing

Kevlar & carbon fiber high-strength composite,resistant to impact

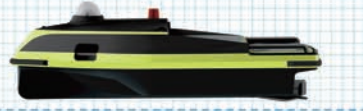
Portable size
Shallow draft
Convenient for transmission



Power System



Propellers are applied with ducted design and protective shield outside to prevent aquatic plants and fishing net from twining.



Parallellled level with the boat and convenient for transmission and placement.



High velocity to max at 3.5m/s,one primary and two assistant propellers perfectly control iBoat to sail as designed route.



High endurance with external battery to extend sailing distance.

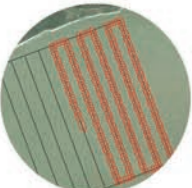
Base System



Industrial controller is of easy use with one key to switch between manual and automatic mode while control distance reaches 2 Km.



Applying directive antenna,communicating distance is more than 2 Km.

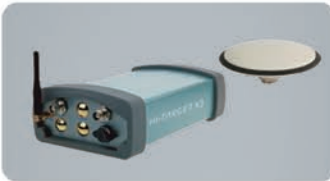


Automatic operation,automatic navigation,auto-return to fixed point and switch between manual and automatic mode at any time.

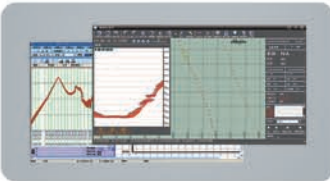
Surveying System



The Hi-Target HD-MAX shows fantastic performance with its high-accuracy professional sounding module.The 0.15~300m sounding range adapts to all kinds of complex topographic surveying.



With Hi-Target high-accuracy GNSS RTK module or DGPS beacon module,the location devices support BDS location equipped with multiple communicating modes including UHF radio,beacon and SBAS.



HiMAX surveying software is available for collecting,guiding and post-processing. Simulative depth and digital depth are combined for conveniently judging true water depth.

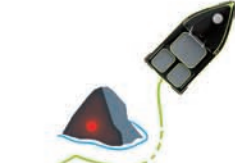
Safety System



Auto-return while low battery or dropped signal.



Assistant engine can still work or help return even the primary engine is broken by accident.



Remote video transmission in real-time besides intelligent obstacle detection and avoidance.