Hi-Target

iBoat BS12 GEN2

Android-powered Multi-function USV



iBoat BS12 GEN2

iBoat BS12 Gen2 is a new generation of compact multifunctional marine surveying platform launched by Hi-Target. It can be equipped with professional equipment such as the iBeam 8140S multibeam echosounder, ADCP, side-scan sonar, and water quality parameter sensors. It is widely used in underwater topographic surveying, hydrological data acquisition, and water quality inspection.

Paired with the new version of the Hi-Survey Boat Android application, iBoat BS12 Gen2 automatically performs data acquisition for single-beam, multibeam, and ADCP. The boat features a built-in single-beam echosounder, an overall length of 1.05 meters, and supports single/dual battery operation with hot-swappable batteries. Combined with other upgraded hardware designs, it delivers safer and more reliable surveying operations.

BENEFITS

Boat Control System

- Smart Auto Mode
- Data Storage
- GNSS+SBES Data Merge
- SIM card for 4G Network
- GNSS+IMU provides stable position data

Android Software

- Smart Planning Survey Line
- Auto-Collect Data (SBES, ADCP, MBES)
- Safety (Return , Obstacle Avoidance, Hover)
- Unlimited-range 4G network connectivity
- View live camera images

Payload

- Max Payload 40kg
- Dual Frequency Echo Sounder
- ADCP （Hi-Target and other brands）
- MultiBeam Echo Sounder
- Water quality Meter

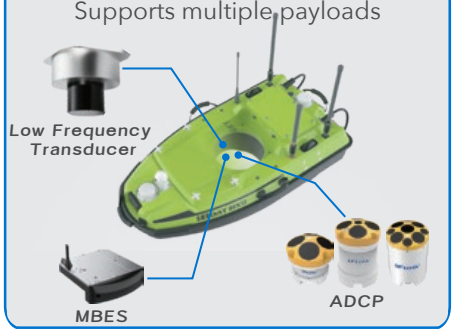
Hardware

- Length: 1050 mm, Weight: 29 kg
- Single/dual battery mode, battery life > 4 hours
- Double-hulled and IP67-rated
- Millimeter-wave radar obstacle avoidance
- Anti-tangle propeller



Advantages

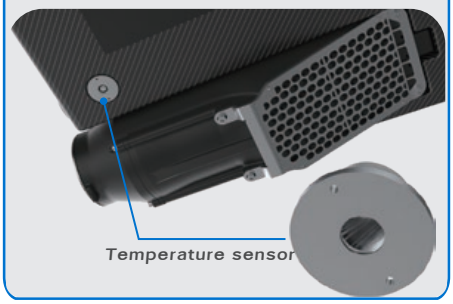
Supports multiple payloads



Length: 1.05 m



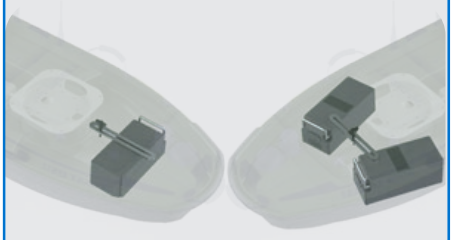
Sensor & IMU



Quick installation



Single/dual battery mode; intelligent battery balance



Removable wheels for easy transport



Multi-device load



MultiBeam Echo Sounder

Comes with a full-featured Android app for parameter adjustment, point cloud display, and data collection
Automatic survey line planning (automatically sets line intervals based on depth)
SPIN technology（Sound Profile Inversion）, automatic calibration of sound velocity profiles
Easy to install; up and running in five minutes.



Single Beam Echo Sounder

Simultaneous measurement at 24 kHz and 200 kHz, depth range 0.1–600 m
Automatic parameter adjustment with real-time display of stable echoes
Temperature sensor, real-time correction of surface sound velocity
Dual data storage (controller, boat), attitude calibration data



ADCP

Draft: 10 cm, reduce blind at the top
Autopilot + Smart Mode: Quickly measure water velocity
Maximum speed of 6.5 m/s; capable of operating in fast-flowing rivers



Other loads

Side-scan sonar, water quality analyzer, water quality sampler



iBoat BS12 GEN2

Hull Specifications	Hull dimension (L × W × H)	1050 mm*558 mm*356 mm
	Weight (Single Battery)	29kg (including one battery)
	Maximum Payload	40kg
	Wave & wind Resistance	Sea state 2
	Draft	110mm
	Moon Pool Dimensions	24cm
	Camera	Dual cameras, simultaneous 360° imaging
	Anticollision sensor	Millimeter-wave radar;Range: 5–30 m
	IP Rating	IP67
	Propeller Type	2*1000W brushless DC
	Battery	32.4 V, 24 Ah; supports single/dual battery mode; supports hot-swapping
	Battery Endurance	1 set of batteries: 4 hours @ 1.5 m/s; standard with two sets
	4G Network	SIM card slot; For controller communication and CORS
	Maximum Speed	6.5m/s
Positioning parameters	Satellite system	BDS B1I/B2I /B3I、GPS L1C/A/L2P(Y)/L2C/L5、Galileo E1/E5a/E5b、GLONASS L1/L2、QZSS L1/L2/L5
	Single positioning accuracy	Horizontal 1.5 m, Vertical 2.5 m
	DGNSS positioning accuracy	Horizontal 40 cm + 1 ppm,Vertical 80 cm + 1 ppm
	RTK Positioning accuracy	Horizontal ±8 mm + 1 ppm, Vertical ±15 mm + 1 ppm
	Direction accuracy	0.1° (1 m baseline)
	IMU accuracy	2.1°/h, maintaining high-precision position for 30 seconds
	Differential mode	CORS , BASE , PPK , PPP (b2b and HAS)
Single beam echo sounder	Frequency	200kHz(standard) / 24kHz(optional)
	Beam angle	5° / 34°
	Depth range	0.2-200m / 1-600m
	Accuracy	±1cm+0.1%h / ±1cm+0.1%h
	Resolution	1cm / 10cm
	Temperature sensor	-55°C to +100°C; real-time automatic sound velocity correction
Software	System	Android 13 System
	Communication Range	2.4 GHz: 2 km / 4G: unlimited range
	Battery Life	8 hours
SLHydro USV Software	Features	Mission planning ; Data acquisition ; Auto-navigation Auto-return when contact is lost ; obstacle avoidance
	SingleBeam	Automatic parameters
	ADCP Survey	Auto flow measurement, auto-adapting flow rate
	MultiBeam Survey	Auto Design Line (Auto-design next survey line based on depth) Auto SPIN: Automatically calibrates sound velocity without SVP data
Multi Sensor OPTIONAL	External Interfaces	Basic Version: 1×RS232 MBES Version: 1×RS232; 1×M2 Port; 1×Network and External Power Supply Interface
	Payload(Optional)	MultiBeam:MBES , dual-frequency SBES , ADCP , SSS , Water Quality Meter
	Compatible ADCP Models	iFlow RP600, RP1200, RP9, M9, RiverStar, RiverPro, RiverRay, RioGrande

AUTHORIZED DISTRIBUTION PARTNER

25A204

Hi-Target Surveying Instrument Co.,Ltd

ADD: Hi-Target Headquarters, No. 6, Hongchuang 2nd Street,
Nancun Town, Panyu District, 511442 Guangzhou, China
www.hi-target.com.cn +86-20-28688296 sales@hi-target.com.cn