Teledyne Oceanscience

Z-Boat 1800

Remotely-Operated Autonomous Hydrographic Survey Boat

Maximize Hydrographic Survey Efficiency

The Teledyne Oceanscience Z-Boat™ is an entirely new option for shallow water hydrographic surveying. Get bathymetry data where conventional methods are not practical or safe; avoid mobilizing a workboat or conducting hazardous and time-consuming wading measurements. The Z-Boat™ uses advanced radio telemetry to offer remotely-operated hydrographic surveys with all data transmitted to the shore in real time, giving the operator total control over the survey process. Navigation of the Z-Boat™ is easy using the GNSS position and heading available on the shore laptop, using standard software such as HYPACK® or Hydromagic. Resistant to corrosion from aggressive water, the Z-Boat™ is ideal for industrial water management applications such as mine tailings ponds. Choose between standard and high-speed propulsion options depending upon the survey environment.

Autonomous Waypoint Navigation for Long Range Surveying

A fully autonomous waypoint navigation drone upgrade module is available to offer laser-straight survey lines and precise positioning for large area or repeating surveys.

PRODUCT FEATURES

- Easy to operate
- Optional autonomous operation with on-board datalogging
- Existing GNSS equipment can be used
- Up to 5m/s (16fps) performance for fast river x-sections
- Compatible with all hydrographic data acquisition packages

- Odom CV100 echosounder for singlebeam surveys
- Odom MB1 compact multibeam echosounder capability
- Tritech StarFish side scan sonar for search and recovery
- Customizable for other sonar or instrumentation payloads
- Portable; under 80lbs. (typical configuration)

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A Teledyne Marine Company
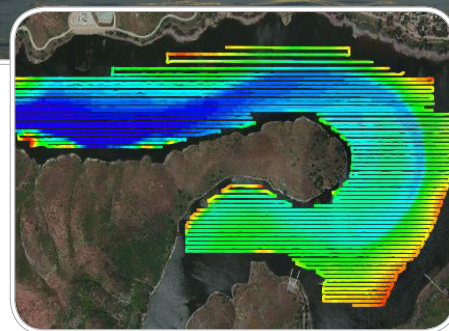
Z-Boat 1800
Remote Hydrographic Suvey Boat

TECHNICAL SPECIFICATIONS

Physical

Hull Length	180cm (5.9 ft.)
Hull Width	90cm (2.95 ft.)
Weight of Base Boat	30kg (66 lbs.)
Payload	30kg (66 lbs.)
Hull Material	UV-Resistant ABS
Motor: Z-Boat 1800™	Single-Brushed DC Outdrive
Motor: Z-Boat 1800™ High Speed	Dual Brushless 24V DC Outdrives

Remote

Navigation Remote Control Unit	Hitec with Vessel Telemetry
Navigation Remote Control Unit Frequency	2.4GHz FHSS
Navigation Remote Control Range	1200m
Data Telemetry Range - Bluetooth	600m
Data Telemetry Range - 900 MHz Hydrolink	>2000m
Data Telemetry Range - 5.8GHz Ethernet	Up to 1500m

Performance

Typical Survey Speed	3-4 kts (1.5-2.0m/s)
Top Speed: Z-Boat™ 1800	4 kts (2m/s)
Top Speed: Z-Boat™ 1800HS	10 kts (5m/s)
Battery Endurance: Z-Boat™ 1800	Up to 150 minutes
Battery Pack: Z-Boat™ 1800	1 x 12V 10Ah
Battery Endurance: Z-Boat™ 1800HS	Up to 240 minutes
Battery Pack: Z-Boat™ 1800HS	3 x 24V 30Ah

GNSS Options

Customer-owned (RTK) GNSS	Contact us for cabling price to use existing unit
L1 heading receiver	Hemisphere V102 / V104
L1/L2 L-band GNSS	Hemisphere A325
L1/L2 RTK base & rover	Hemisphere S320

Waypoint Navigation

Manufacturer	MSubs Ltd (UK)
Telemetry Range	Up to 4000m
Software	Proprietary "Z-Boat Control" package

Sonar Instrumentation

Singlebeam 200kHz	Teledyne Odom CV100
Singlebeam 200kHz	Airmar "Smart" Transducer SS510
Dual frequency singlebeam 33/200kHz	Teledyne Odom CV100 DF
Side Scan 450kHz or 990kHz	Tritech StarFish
Multibeam echosounder	Odom MB1 or R2Sonic 2020
Habitat mapping	BioSonics MX

Other Instrumentation

Water quality monitoring	YSI 6600 multiparameter sonde / Hanna 9829 probe
Video	Ethernet HD camera
Motion correction	Advanced Navigation Micro MRU
Velocity profiling	Teledyne RD Instruments Rio Grande, RiverRay, RiverPro, StreamPro
	Sontek M9 / S5
	Linkquest ADCP

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