Teledyne RESON

SeaBat® Integrated Dual Head

T20/ T50-R Ultrahigh resolution Multibeam Echosounder Survey System

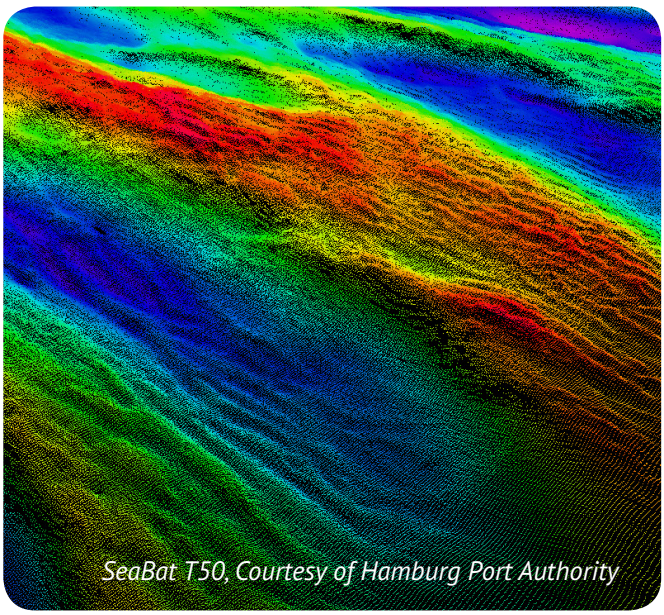
Complete sonar system with built-in INS

The SeaBat Integrated Dual Head (IDH) is the latest addition to the leading SeaBat T-series product range. Connected to just one very compact Rackmounted Sonar Processor (RSP), the SeaBat IDH is a complete and powerful sonar system.

The SeaBat IDH, which produces 1024 beams per ping, is fully frequency agile from 200 to 400kHz, allowing for improved swath performance, less interference from other sensors and reduced survey time under challenging acoustic conditions.

Unprecedented clean bathymetry data, normalized backscatter designed for seabed classification, multiple detections for increased target details and very advanced beamforming modes. The SeaBat T-series provides faster operational surveys and reduced processing time.

Ease of Integration
The optional built-in INS comes pre-configured and pre-wired for faster mobilization and easier interfacing. The built-in INS provides industry recognized performance and processing options.



SeaBat T50, Courtesy of Hamburg Port Authority

SeaBat IDH T20/50-R standard configuration

Rack-mounted Sonar Processor (RSP)

- Single point for all cable connections – for easy and fast mobilization
- Accurate sensor time-tagging and motion stabilization from the optional integrated INS
- 10m or 25m cable configuration with cable options up to 100m
- Compact 2U form factor for installation in a standard 19” rack

SeaBat IDH sonar head assembly

- T-series wide band sonar arrays
- Lightweight sonar brackets
- Robust titanium housing
- Weight in water from 16.2 kg

3 years warranty
Our hardware is quality-tested to meet the most demanding standards. Backed by the full support of our comprehensive after-sales program and 3 years of warranty, you can be sure that the SeaBat IDH won’t let you down.

PRODUCT BENEFITS

- All-in-one fully integrated survey system
- A single sonar processor for two sonar heads
- The compact system allows for fast mobilization, minimal interfacing and extremely low space requirements
- Unprecedented clean and ultra-high data quality for faster operational surveys and reduced processing time
- Fully frequency agile from 200 to 400kHz, allowing for improved swath performance and reduced survey time under challenging conditions
- The new compressed water column data significantly reduces data volume while maintaining the required information
- Normalized backscatter designed specifically for accurate, reliable and repeatable sea bed classification

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	IDH T20-R	IDH T50-R
Input Voltage	100-230VAV 50/60Hz	
Transducer cable length	10m standard. Optional: 25m, 50m, 100m	25m standard Optional: 10m, 50m, 100m
Temperature (operational/storage)	RSP: -5°C to +45°C / -30°C to +70°C Wet-end: -2°C to +36°C / -30°C to +55°C	
Sonar head width / weight (air) / weight (water)	72cm 31.5kg / 16.1kg	95.3cm 41kg / 21.2kg
Teledyne Type 20/30 IMU Height/width/depth Weight (air)/weight(water)	12.3cm/11.8cm/9.6cm 3.0kg / 1.6kg	
Across track beam width[1]	1° @400kHz, 2° @200kHz	0.5° @400kHz, 1° @200kHz
Along track beam width[1]	1° @400kHz, 2° @200kHz	1° @400kHz, 2° @200kHz
Number of beams	20 to 1024 user selectable	
Swath coverage	Up to 210°	Up to 220°
Typical Depth (CW[2])	0.5-150 meters@400kHz, 0.5-375 meters @200kHz	
Max Depth (CW[3])	250 meters @400kHz, 550 meters @200kHz	
Typical Depth (FM[2])	0.5-180 meters @400kHz, 0.5-450 meters @200kHz	
Max Depth (FM[3])	300 meters @400kHz, 575 meters @200kHz	
Ping rate (range dependent)	Up to 50 pings/s	
Pulse length	30-300µs (CW), 300-5000µs (FM)	
Depth resolution	6mm	
Depth rating	50m	

Teledyne INS Type -20	Roll/Pitch 0.02°	Heading[4] 0.015°	Heave[4] 5cm/5%	TrueHeave 2cm/2%	Optional postprocessing with POSPac MMS. Optional Fugro MarineStar®.
Teledyne INS Type -30	Roll/Pitch 0.01°	Heading[4] 0.010°	Heave[4] 5cm/5%	TrueHeave 2cm/2%	

For relevant tolerances for dimensions above and detailed outlined drawings see Product Description
1 Nominal values
2 This is a depth range within which the system is normally operated, from the minimum depth to a depth value corresponding to the max. swath -50%.
3 This is the single value corresponding to the depth at which the swath is reduced to 10% of its max. value. For actual swath performance refer to Product Description.
4 With 4m GPS base line. Heave 5cm/5% whichever is greater for periods +/- 20sec

Scope of supply

IDH SeaBat T20-R

- 2*EM7219 receiver
- 2*TC2181 projector
- Rack-mounted sonar processor
- 10m wet-end cable set
- 2*T20 Etronax bracket
- 1*T20 dual head Etronax bracket
- Nuts'n'bolt kit for ease of installation
- 3-year warranty

IDH SeaBat T50-R

- 2*EM7218 receiver
- 2*TC2181 projector
- Rack-mounted sonar processor
- 25m wet-end cable set
- 2*T50 Etronax bracket
- 1*T50 dual head Etronax bracket
- Nuts'n'bolt kit for ease of installation
- 3-year warranty

Optional extras

- Built-in INS
- Hydrodynamic fairings
- Alternative wet-end cable lengths
- Teledyne PDS survey software
- Multidetect
- FlexMode
- Normalized backscatter (T50 only)
- Service Level Agreement

For more details visit www.teledyne-reson.com or contact your local Teledyne RESON Office. Teledyne RESON reserves the right to change specifications without notice. 2016©Teledyne RESON

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