

SeaBat[®] Integrated Dual Head

T20/ T50-R/ T51-R Ultrahigh resolution Multibeam Echosounder Survey System



The SeaBat Integrated Dual Head (IDH) is a complete sonar system with built-in INS. 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 or 400 to 800kHz, 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.

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, 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

SeaBat IDH T20/ 50-R /T51-R standard configuration

Rack-mounted Sonar Processor (RSP+):

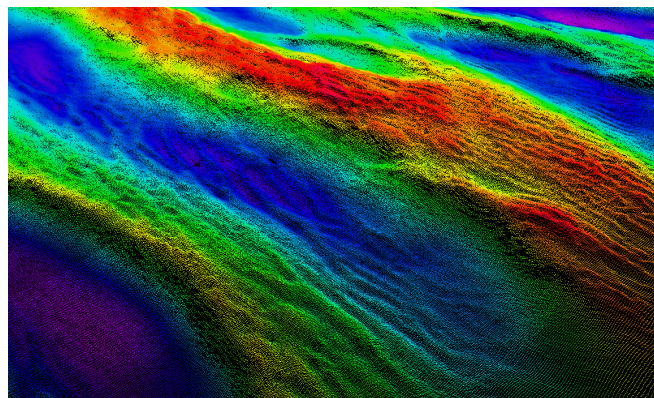
- Single point for all cable connections – for easy and fast mobilization
- Accurate sensor time-tagging and motion stabilization from the optional integrated INS
- 10m or 25m cable configuration
- Compact 2U form factor for installation in a standard 19" rack

SeaBat IDH sonar head assembly:

- T-series wide band sonar arrays
- Lightweight dualhead sonar bracket
- 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.



SeaBat T50, Courtesy of Hamburg Port Authority



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SYSTEM SPECIFICATIONS

	IDH T20-R	IDH T50-R	IDH T51-R			
Input Voltage:	100-230VAV 50/60Hz					
Transducer cable length:	10m standard. Optional: 25m, 50m	25m standard Optional: 10m, 50m	25m standard Optional: 10m			
Temperature (operational/storage):	RSP: -5°C to +45°C / -30°C to +70°C Wet-end: -2°C to +36°C / -30°C to +70°C					
Sonar head width:	57.6cm	95.3cm	95.3cm			
weight (air) / weight (water):	20.8kg / 11.2kg	27.2kg / 14.2kg	25.8kg / 16.6			
Teledyne Type +20/ +40 IMU						
Height/width/depth:	12.3cm/11.8cm/9.6cm					
Weight (air)/weight(water):	3.0kg / 1.6kg					
Across track beam width ¹ :	1° @400kHz, 2° @200kHz	0.5° @400kHz, 1° @200kHz	0.5° @400kHz, 0.25° @800kHz			
Along track beam width ¹ :	1° @400kHz, 2° @200kHz	1° @400kHz, 2° @200kHz	01° @400kHz, 0.5° @800kHz			
Number of beams:	20 to 1024 user selectable					
Swath coverage:	Up to 210°	Up to 230°	Up to 230°			
Typical Depth (CW ²):	150m@400kHz, 0.5-375m@200kHz	>85m@800kHz, 250m@400kHz				
Max Depth (CW ³):	250m@400kHz, 550m@200kHz	>125m@800kHz, 250m@400kHz				
Typical Depth (FM ³):	180m@400kHz, 0.5-450m@200kHz	>85m@800kHz, 180m@400kHz				
Max Depth (FM ³):	300m@400kHz, 575m@200kHz	>150m@800kHz, 300m@400kHz				
Max ping rate:	Up to 50 pings/s					
Pulse length:	30-300µs (CW), 300-5000µs (FM)					
Depth resolution:	6mm					
Depth rating:	50m					
	Roll/Pitch	Heading ⁴	Heave ⁴	TrueHeave ⁴	Positioning accuracy (with RTK)	Optional:
Teledyne INS Type +20:	0.02°	0.015°	5cm/5%	2cm/2%	Horizontal: +/- (8mm + 1ppm*baseline length) Vertical: +/- (15mm + 1ppm*baseline length)	• Postprocessing POSPac MMS [®] • Trimble CenterPoint RTX [®] • Fugro MarineStar [®]
Teledyne INS Type +40:	0.008°	0.010°				

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 GNSS baseline. Heave 5cm/5% whichever is greater for periods +/- 20sec

⁵ An extinction coverage of +/-20° is observed at about 530 meter depth.

OPTIONAL EXTRAS

- Built-in INS
- Hydrodynamic fairings
- Alternative wet-end cable lengths
- Teledyne PDS survey software
- SV-probe
- Multi-detect
- FlexMode
- Normalized backscatter (T20,T50)
- Service Level Agreement
- ClearSignal[™] Anti-fouling paint applied

SCOPE OF SUPPLY

IDH SEABAT T20-R	IDH SEABAT T50-R	IDH SEABAT T51-R
2*EM7219 receiver	2*EM7218 receiver	2* EM7222 receiver
2*TC2181 projector	2*TC2181 projector	2* TC2186 projector
Rack-mounted sonar processor		
10m wet-end cable set	25m wet-end cable set	25m wet-end cable set
2* T20/ T50/ T51 Etronax bracket		
1* T20/ T50/ T51 dual head Etronax bracket		
Nuts'n'bolt kit for ease of installation		
3-year warranty		