SeaBat® T50 Extended Range

Ultrahigh resolution mid-water Multibeam Echosounder with fully integrated Inertial Navigation System



The SeaBat T50 Extended Range is the very latest addition to the leading SeaBat T-series product range, engineered from the ground up to evolve with your business. Combined with a very compact Rack-mounted Sonar Processor (RSP), the SeaBat T50 Extended Range produces unprecedented clean data, at unprecedented resolution, providing faster operational surveys and reduced processing time.

The SeaBat T50 Extended Range is fully frequency agile from 150 to 420 kHz, allowing for extremely high resolution surveys at shallower water depths while maintaining the capability to operate out to about 900 meter water depth!

The Rack-mounted Sonar Processor comes with an optional industry leading fully integrated Inertial Navigation System for accurate sensor time tagging and motion stabilization.

The SeaBat T50 Extended Range is designed for very fast mobilization on any type of survey vessels, securing minimal interfacing and low space requirements – or it can be installed as a permanent installation in a sea chest or on a hoist system.

Product benefits

- All-in-one, fully flexible and fully integrated survey system
- The compact system allows for fast mobilization, minimal interfacing and extremely low space requirements.
- Extremely high resolution in shallow water and impressive range performance in deep water.
- Fully frequency agile from 150 to 420 kHz, allowing for continuous operation from shallow to deep.
- The new compressed water column data significantly reduces data volume while maintaining the necessary information.

Rack-mounted Sonar Processor (RSP)

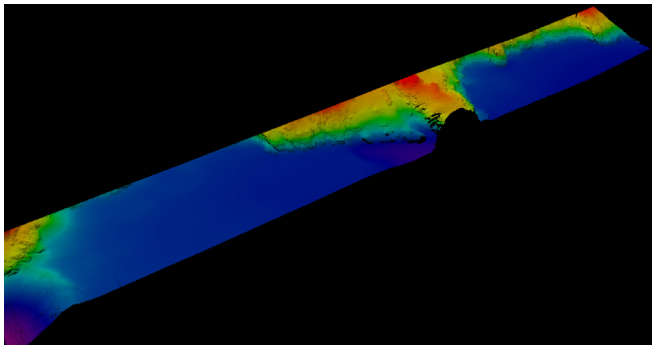
- Single point for all cable connections – for easy mobilization
- Accurate sensor time-tagging and motion stabilization from the optional integrated INS
- Standard 25m cable configuration
- 2U form factor in standard 19" rack

SeaBat T50 Extended Range sonar head assembly

- 150 – 420kHz wide-band sonar arrays
- Robust titanium housing
- Less than 13kg in water

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 T-series won't let you down.



Godthåbsfjorden, Greenland
Courtesy of Greeland Institute of Natural Resources



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SEABAT T50 EXTENDED RANGE SYSTEM SPECIFICATIONS

Input voltage:	100-230VAC 50/60Hz
Transducer cable length:	25m (standard) optional: 10m or 50m
Temperature (operational / storage):	Rack-mounted sonar processor: -5°C to +45°C / -30°C to +70°C Sonar wet-end: -2°C to +36°C / -30°C to +70°C

	height [mm]	width [mm]	depth [mm]	weight [kg/air]	weight [kg/water]
Receiver (EM7218):	102.0	460.0	90.7	8.2	3.9
Projector (TC2187):	86.6	93.1	500	9.8	6.8
Rack-mounted sonar processor:	88 (2U)	478*	462	12.3-13.8	N/A

* Standard 19" rack-mount

T50 extended range acoustic performance:	400kHz	200kHz	150kHz
Across-track receiver beam width[1]:	0.5°	1°	1.5°
Along-track beam width[1]:	0.5°	1°	1.5°
Number of beams:	10 - 1024		
Swath coverage (up to):	10°-150° Equi distance, 10°- 170° Equi Angle		
Typical depth (CW[2]):	300m	600m	600m
Max depth (CW[3]):	350m	750m	750m
Typical depth (FM[2]):	350m	650m	650m
Max depth (FM[3]):	425m	900m	900m
Ping rate (range dependent):	Up to 50 pings/s		
Pulse length (CW):	30 – 300µs		
Pulse length (FM):	300µs – 10ms		
Depth resolution:	6mm		
Depth rating (sonar head):	50m		

	Roll/Pitch	Heading[4]	Heave[4]	TrueHeave[4]
Teledyne INS Type +20:	0.02°	0.015°	5cm/5%	2cm/2%
Teledyne INS Type +40:	0.008°	0.010°		

Positioning accuracy (with RTK)

Horizontal: +/-(8mm + 1ppm*baseline length)

Vertical: +/-(15mm + 1ppm*baseline length)

Optional:

- Postprocessing POSPac MMS®
- Trimble CenterPoint RTX®
- Fugro MarineStar®

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

T50 EXTENDED RANGE

- Receiver EM7218
- Projector TC2187
- Rack-mounted Sonar Processor
- 25m receiver cable
- 25m projector cable
- Wet-end bracket
- Nuts and bolt for ease of installation
- 3-year warranty

OPTIONAL EXTRA FEATURE

- Integrated INS Type 20 or Type 30
- 10m or 50m cable
- Hydro dynamic fairing
- Dual head bracket
- RESON Sound Velocity Probes
- Teledyne PDS survey package
- RESON Service Level Agreements
- Motion and positioning sensors
- Multi-Detect - multiple detections for enhanced detail over complex features and water column targets
- FlexMode – increase data density where you need it most
- Pipe detection and tracking – optimize detection of pipes
- Full rate dual head

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Specifications subject to change without notice.
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