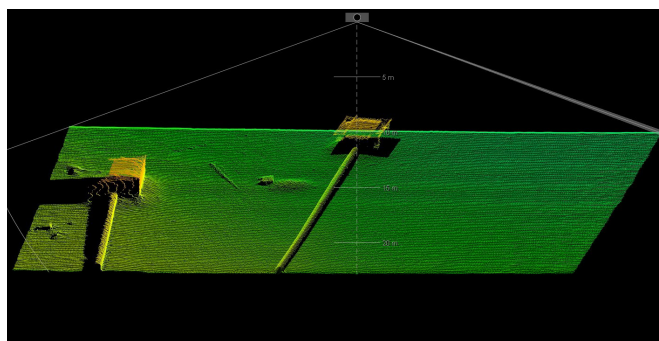


SeaBat T51-S

Designed for mapping with the highest frequency

SeaBat T51-S sets a new standard in subsea high-resolution mapping. With the smallest receiver beamwidth available and wide swath capabilities, users no longer have to choose between exceptional resolution and operational efficiency.

Equipped with state-of-the-art subsea sonar processor, SeaBat T51-S offers extended storage capacity and powerful beamforming processing, ensuring superior data quality and performance.



Operators benefit from a modern user interface with automated controls for effortless operation, giving both new users and AUV operators the confidence that their data are captured with optimal settings for maximum accuracy and reliability.

T51-S Standard Configuration

- EM7222-1 400/800kHz receiver
- TC2190 400/800kHz transmitter
- Subsea Sonar Processor (SSP+)
- Cable options 1, 3, 10 m
- 22-60 VDC power input
- 2.0 TB data storage
- 6000 m depth rating

FEATURES

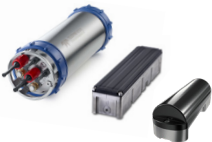
- Full 170° swath width at both 400 and 800 kHz
- Powerful automated controls for bathymetry and backscatter
- Single transmitter for all frequencies
- Titanium housing / 6000 m depth rated
- 1024 beams
- Standard 3 years warranty

OPTIONAL EXTRA FEATURES

- PDaT – Automated pipeline detection and tracking
- FlexMode – Increase beam density on the pipe or cable
- X-range – Increase range performance
- FRDH – Improve along track resolution in dualhead mode

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SYSTEM SPECIFICATIONS

T51 Acoustic performance:	350-430kHz	700-800kHz
Across-track receiver beam width ¹ :	0.5°	0.25°
Along-track beam width ¹ :	1°	0.5°
Number of beams:	10 - 1024	
Swath coverage (up to):	10°-170°	
Typical depth (CW ²):	0.5- 135 meters	0.5-75 meters
Max depth (CW ³):	225 meters	110 meters
Typical depth (FM ²):	0.5-160 meters	0.5-75 meters
Max depth (FM ³):	270 meters	135 meters
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):	6000 meters	
Input voltage:	22-60V DC	
Power (approx):	Average 110W. Peak 300W	
Temperature (operational / storage):	Subsea Sonar Processor: -2°C to +36°C / -30°C to +70°C Sonar wet-end: -2°C to +36°C / -30°C to +55°C	

	height [mm]	width [mm]	length [mm]	weight [kg/air]	weight [kg/water]
EM7222-1:	87	460	102	8.7	5.3
TC2190:	88	91	280	2.2	0.7
SSP+:	538	174	N/A	24.4	12.0

For relevant tolerances for dimensions above and detailed outlined drawings contact Teledyne RESON Engineering Services for more information

¹All beam widths measured at -3dB, shaded and unsteered with a sound velocity of 1480m/s.
²This is the range within which the system is normally operated.
It consists of the minimum range below the sensor to a range value corresponding to max swath -50%
³This is a single value corresponding to the range at which the swath has reduced to 10% of its maximum value.

