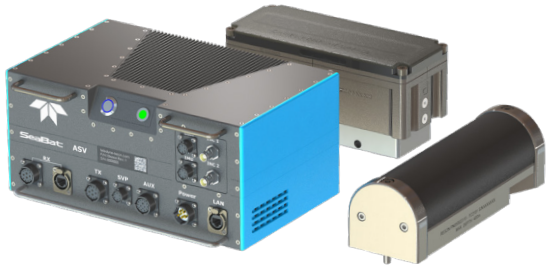
SeaBat® T20-ASV

High resolution multibeam echosounder



Superior multibeam technology engineered for uncrewed platforms

The SeaBat® T20-ASV is built around the renowned SeaBat® T20 and maintains the incredible SeaBat® data quality in a smaller form factor. Now, optimized power requirements ensure extended and crucial mission time on battery-powered vehicles.

The SeaBat® T20-ASV includes the unmatched Tracker Autopilot offering truly autonomous sonar operation without sacrificing resolution or speed.

Internal storage, integrated data acquisition software and the latest developments in integrated INS completes the survey solution.

PRODUCT FEATURES & BENEFITS

Features

- **Sonar User Interface** – highly configurable to help you complete the job.
- **Tracker Autopilot** – unmatched truly autonomous sonar operation. Automatic optimization of sonar settings for optimal survey efficiency.
- **Internal storage** – log your survey results directly on the fast internal SSD.
- **Data products** – bathymetry, backscatter, sidescan, full or copmpressed water column. Record in parallel bathymetry, Snippets backscatter, sidescan backscatter, water column backscatter (full or compressed), without compromising pingrates.

Optional extra features

- **Integrated Inertial Navigation System** – the very latest in INS development, fully integrated in the sonar processor
- **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 & Tracking** – unique to SeaBat, optimize detection of pipes
- **Normalized Backscatter** – for stable and sharp backscatter data

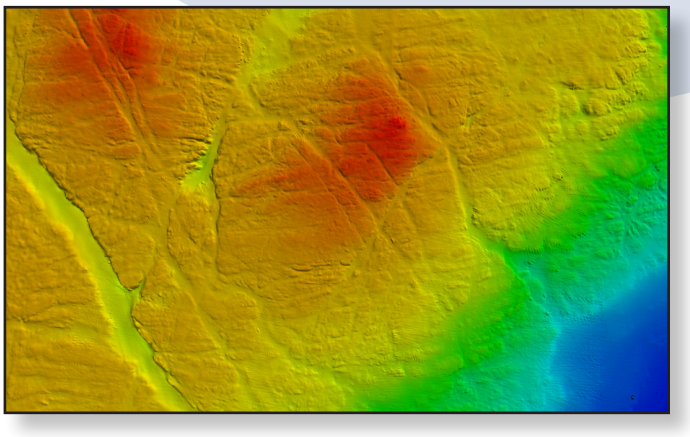
SeaBat® T20-ASV:

ASV Sonar Processor:

- OEM integrated on the vehicle
- Internal dry cables to bulkhead
- Easy to use Amphenol connectors

Sonar head

- 190 – 420kHz frequency agile
- Robust titanium housing
- Customized cables to accurately match vehicle



SeaBat® T20-ASV is designed for and offered to selected manufacturers of uncrewed and autonomous platforms.

Contact your local Teledyne Marine representative for information about which selected ASV manufacturers currently offer the SeaBat® T20-ASV.

TELEDYNE MARINE
RESON
Everywhereyoulook™

SeaBat T20-ASV High resolution multibeam echosounder

SEABAT T20-ASV SYSTEM SPECIFICATIONS

Input voltage	24VDC or 100-230VAC 50/60Hz
Power (typical / max)	90W / 110W
Ingress protection	IP21
TRANSDUCER CABLE LENGTH	Optimized depending on ASV integrator
Temperature (operational)	Processor: -5°C to +45°C Wet-end: -2°C to +36°C
Temperature (storage)	Processor/wet-end: -30°C to +70°C

	height [mm]	width [mm]	depth [mm]	weight [kg/air]	weight [kg/water]
T20 Rx (EM7219)	102.0	254.0	123.0	5.0	2.2
T20 Tx (TC2181)	86.6	93.1	280	5.4	3.4
ASV Sonar Processor	150	328	248 (incl. handles)	6.4	N/A

T20 Acoustic performance	**400kHz (max. frequency)**	**200kHz(min. frequency)**
Across-track receiver beam width[1]	1° (center)	2° (center)
Along-track beam width[1]	1°	2°
Number of beams	Min 10, Max 1024	
Swath coverage (up to)	140° Equi distance, 170° Equi Angle	
Typical Depth (CW[2])	Up to 140 meters	Up to 275 meters
Max Depth (CW[3])	200 meters	420 meters
Typical Depth (FM[2])	Up to 150 meters	Up to 310 meters
Max Depth (FM[3])	240 meters	450 meters
Ping rate (range dependent)	Up to 50 pings/s	
Pulse length (CW)	15 – 300µs	
Pulse length (FM)	300-2000µs	
Depth resolution	6mm	

<table>
<tr><td rowspan="4">Teledyne INS Type +20

Teledyne INS Type +40</td><td>Roll/Pitch</td><td>Heading[4]</td><td rowspan="4">Heave[4]

5cm/5%</td><td rowspan="4">TrueHeave[4]

2cm/2%</td><td>Positioning accuracy (with RTK)</td><td rowspan="4">Optional postpro-cessing with POSPac MMS. Optional Fugro MarineStar®, Trimble CenterPoint RTX</td></tr>
<tr><td>0.02°</td><td>0.015°</td><td>Horizontal: +/-(8mm + 1ppm*baseline length)</td></tr>
<tr><td>Roll/Pitch</td><td>Heading[4]</td><td rowspan="2">Vertical: +/-(15mm + 1ppm*baseline length)</td></tr>
<tr><td>0.008°</td><td>0.010°</td></tr>
</table>

For relevant tolerances for dimensions above and detailed outlined drawings see Manual .

[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 Manual.

[4] With 4m GNSS base line. Heave 5cm/5% whichever is greater for periods +/- 20sec

T20-ASV BASE SCOPE OF SUPPLY

- ASV sonar processor
- Receiver EM7219
- Projector TC2181
- Software and shipping cases etc.
- Dry-end cables with bulkhead connectors
- Mounting bracket
- Fastening kit

OPTIONAL

- RESON SVP70 sound velocity probe
- Custom length wet-end cables
- Integrated GNSS-INS
- Fairing

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