



## Bedrock Ocean Exploration Commercial Specifications

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Bedrock is a vertically-integrated company building and operating autonomous underwater vehicles (AUVs) optimized for nearshore geophysical surveys. Developed with industry-leading sensors, this second generation vehicle enables Bedrock to offer low logistics survey services and deliver high-quality geophysical datasets capable of meeting the most stringent data quality standards.

### Physical Attributes

- Rated Depth: 300m
- Length: 2.4m
- Weight in Air: 60 kg

### Speed

- Survey: 3 knots

### Battery

- 3 KWh Custom Lithium-ion swappable battery

## Sensors

### Inertial Navigation System

- Exail Phins 9 Compact
- 0.02 %DT CEP-50 DVL-Aided

### DVL

- Nortek DVL500 Compact
- Nortek DVL1000 Compact

### GNSS

- U-blox: ZED-F9P-02B
- L1/L2

### Forward Looking Sonar

- NORBIT OEM FLS-42
- Frequency: 400kHz
- 90° @ 50m Range
- Terrain Following

### Pressure Sensor

- AML Oceanographic
- 0.05 dbar Accuracy

### On Board SV&T

- AML Oceanographic

### Communications & Tracking

- Iridium / Wifi / ISM Radios
- ACOMM

### CTD

- SonTek Castaway deployed from follow vessel

### Backup Recovery

- Self Powered Acoustic Tracker

## Configuration 1 | MBES + SSS + MAG

Designed for **high pass** reconnaissance-level bathymetric surveys with simultaneous collection of backscatter, magnetometer and side-scan data.



### MBES

- NORBIT OEM MBES-42 WBMS
- Frequency: 400kHz
- 130° x 512 beams
- 2° along track, 1° across track
- Datasets: Bathymetry, Backscatter
- Raw format: S7K



### SSS

- Starfish 454 OEM
- Frequency: 450 kHz Chirp
- Contact detection at 30cm
- Raw format: XTF



### MAG

- Ocean Floor Geophysics Magnetometer
- Self compensating
- 3-axis 0.5 nT mag
- 20 Hz sampling rate
- Raw format: CSV

## Configuration 2 | SBP + SSS + MAG

Optimized for **low pass** surveys to simultaneously collect sub-bottom profiler, magnetometer and side-scan data for use cases such as UXO and cable inspection surveys.



### SBP

- NORBIT OEM SBP-42
- Parametric
- Primary frequency: 200kHz
- Secondary frequency: 5-20kHz, 3° opening
- Raw format: SGY



### SSS

- Starfish 454 OEM
- Frequency: 450 kHz Chirp
- Contact detection at 30cm
- Raw format: XTF



### MAG

- Ocean Floor Geophysics Magnetometer
- Self compensating
- 3-axis 0.5 nT mag
- 20 Hz sampling rate
- Raw format: CSV