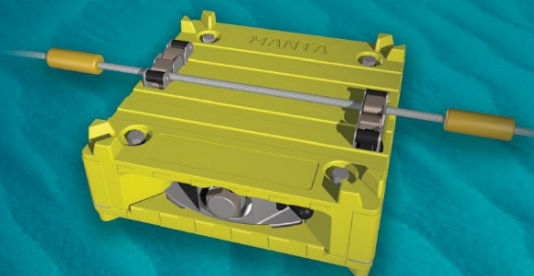


# MANTA<sup>®</sup>

## 4C Ocean Bottom Acquisition System



### FEATURES & BENEFITS

- Ocean bottom node suitable for surveys in water depths to 3,000m
- Flexible placement methods include node on a rope (NOAR), node on a wire (NOAW) or deployment by remotely operated underwater vehicle (ROV)
- Modular node combines contemporary micro-components with recent advances in rechargeable power-dense battery technology
- 4-C multicomponent sensor incorporates three omnidirectional geophones and a hydrophone. Integrated inclinometer continually records the orientation of the node once it is positioned on the seafloor.

### MANTA GENERAL SPECIFICATIONS

#### PHYSICAL

Weight in air:	22.7 kg (titanium)
Weight in water:	12.3 kg (titanium)
Dimensions:	350 mm wide x 350 mm depth
Height:	130 mm

#### OPERATIONAL/ENVIRONMENT

Max operating depth:	3,000m
Operating temperature:	-5°C to 45°C
Battery duration:	100 days
Battery recharge time:	15% / hour

#### SENSOR

Hydrophone:	HTI-96-Min
Geophone:	Omnidirectional, 14Hz, with 0.7 damping
Inclinometer:	3 Axis MEMS, +/- 1.5 deg

#### DATA RECORDING SYSTEM

Channels recorded:	4
Sample rates:	1 ms, 2 ms, 4ms
µSD card:	64 GB, 120 days, 2 ms sampling
ADC resolution:	24-bit
Gain settings:	3 gain settings with 12dB step. Maximum gain optimized for node max water depth.
Anti-aliasing filter:	Linear phase, 86.6% of Nyquist
Dynamic range:	>120 dB @ 0 dB gain setting
DC blocking filter:	Selectable

#### TIMING

Clock type:	Low power OCXO
Residual error after correction:	Less than 1 ms over 60 days
Time synchronization:	GPS disciplined IEEE 1588 PTPv2