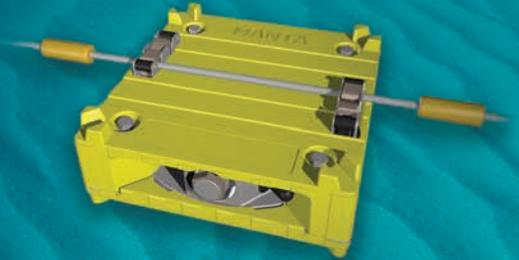
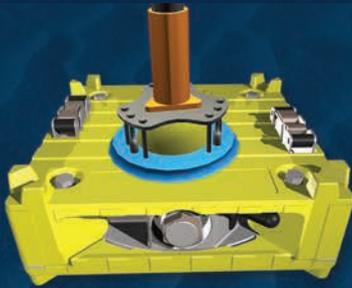


MANTA®

A Seismic Shift in OBN Efficiency



FEATURES AND BENEFITS

- ▶ Ocean bottom node technology suitable for surveys in water depths to 3000 meters
- ▶ Flexible placement methods include node on a wire (NOAW) or deployment by remotely operated underwater vehicle (ROV)
- ▶ Highly automated 'no touch' deployment and recovery system reduces HSE exposure while maximizing operational efficiency
- ▶ Modular back deck sub-systems and compact node size minimizes installation footprint, resulting in increased inventory and lower mobilization costs

Fully Autonomous Multicomponent Seabed Seismic System

Compact Ocean Bottom Seismic (OBS) single node technology for acquiring seismic data to 3000 meters of water depth. Versatility in survey designs allows for dense source grid, full-azimuth and long offset surveys in the most challenging and obstructed environments from shallow transition zones to deep water. Operationally efficient, highly automated system allows for deployment from a permanent installation or a vessel of opportunity anywhere in the world.

The Manta

Long-endurance, 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:	19.1 kg (aluminum); 22.7 kg (titanium)
Weight in water:	8.7 kg (aluminum); 12.3 kg (titanium)
Dimensions:	350 mm wide x 350 mm depth
Height:	130 mm

Operational/Environment

Max operating depth:	2200m (aluminum); 3000m (titanium)
Operating temperature:	-5°C to 40°C
Battery duration:	75+ days
Battery recharge time:	12.5% / hour

Sensor

Hydrophone:	HTI-96-Min
Geophone:	Omnidirectional, 14Hz, with 0.7 damping
Inclinometer:	3 Axis MEMS range +/- 180 deg resolution 0.5 deg +/- 1.5 deg

Data Recording System

Channels recorded:	4
Sample rates:	1 ms, 2 ms
µSD card:	64 GB, 120 days, 2 ms sampling
ADC resolution:	24-bit
Anti-aliasing filter:	Linear or Minimum phase

Time Synchronization

GPS disciplined
IEEE 1588 PTPv2

Clock Stability (OCXO)

Residual error after correction:	Less than 1 ms over 60 days
----------------------------------	-----------------------------

Rev. APR-2019