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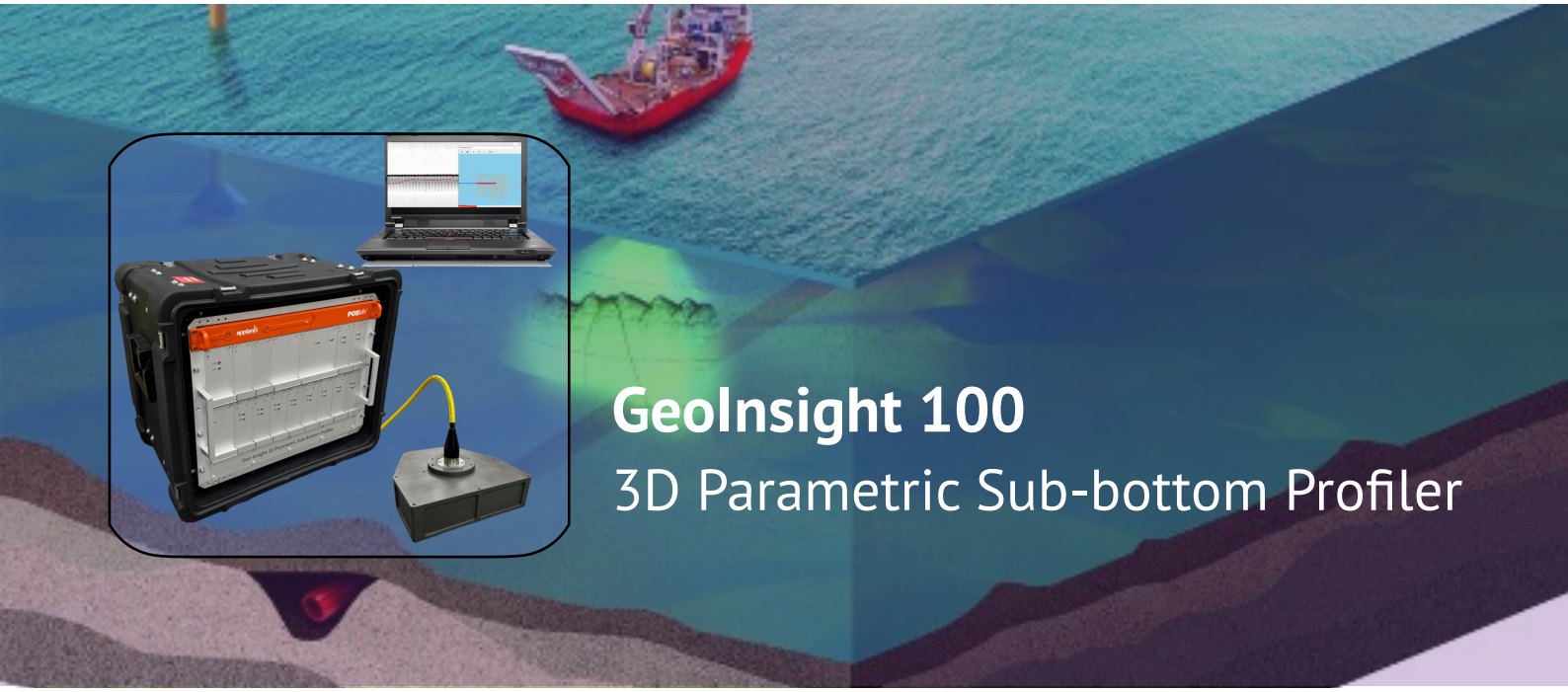

GeoInsight 100

3D Parametric Sub-bottom Profiler

Description

Based on parametric acoustic principle, GeoInsight 100 features not only single beam sub-bottom profiling (bathymetry and 2D sediment waterfall), but also phased multibeam for wideband survey. The user can set up gain compensation, filter tracking, secondary frequency profiling in its standard software. 2D sediment data can be mosaicked into 3D seabed view for quick subsea site investigation and buried target inspection.

The whole system is manufactured in China with competitive specifications in the market. With wide selection of secondary frequency and short wavelength, Geo Insight can inspect small buried target under seabed. The 3D imagery makes it ideal for quick offshore site survey and analysis.

Application

- Geological and geophysical investigation
- Sedimental survey and analysis for dredging projects
- Routing survey and cable-laying
- Marine mineral investigation
- Sub-bottom searching of cables, obstacles and boulders, etc.
- Underwater archaeological survey of shipwrecks, relics and geological subsidence, etc.
- Water column and gas monitoring

Features

- Compact and portable
- Easy to install and operate
- All-in-one design suitable for various vessels
- High resolution imagery for inspection of small buried target
- Real-time 3D data

Ocean Physics Technology Ltd.
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Technical Specifications of GeoInsight 100 3D SBP System

Technical Specifications	
Primary Frequency	85 - 115 kHz
Pulse Length	0.05 - 1 ms
Beamwidth @ Primary Frequency	2.5 x 8 deg
Source Level @ Primary Frequency	better than 237 dB/uPa@ 1m @ 100 kHz
Secondary Frequency	5 - 20 kHz
Beamwidth @ Secondary Frequency	approx. 3 x 10 deg
Source Level @ Secondary Frequency	better than 194 dB/uPa@ 1m @ 10 kHz
Receiver Bandwidth	5 - 20 kHz
Acquisition speed	128 ksps @ 24 bit
Dynamic Range	110 dB
Ping Rate	max 40 pings/s
Range Resolution	0.05 m
Sediment Penetration	< 40 m (Depend on sedimental type and environmental noise)
Water Depth Range	< 400 m (bathymetry range)
Phased Array Transmission	Max ± 23 °, maximum 93 beams
Channel of Receiver	No less than 2 channels(Primary & Secondary)
Heave / Roll / Pitch Compensation	heave, roll

Physical Specifications	
Power Consumption	less than 300W
Power Supply	220 VAC
Communications	Ethernet, PC control
External Sensors	GPS, IMU, external trigger
Dimension and Weight of Transducer	370 x 370 x 110 mm , 35 kg (incl. 20m cable)
Dimension and Weight of Topside Unit	610 x 580 x 525 mm , 50 kg (stainless steel) (Rotomold)

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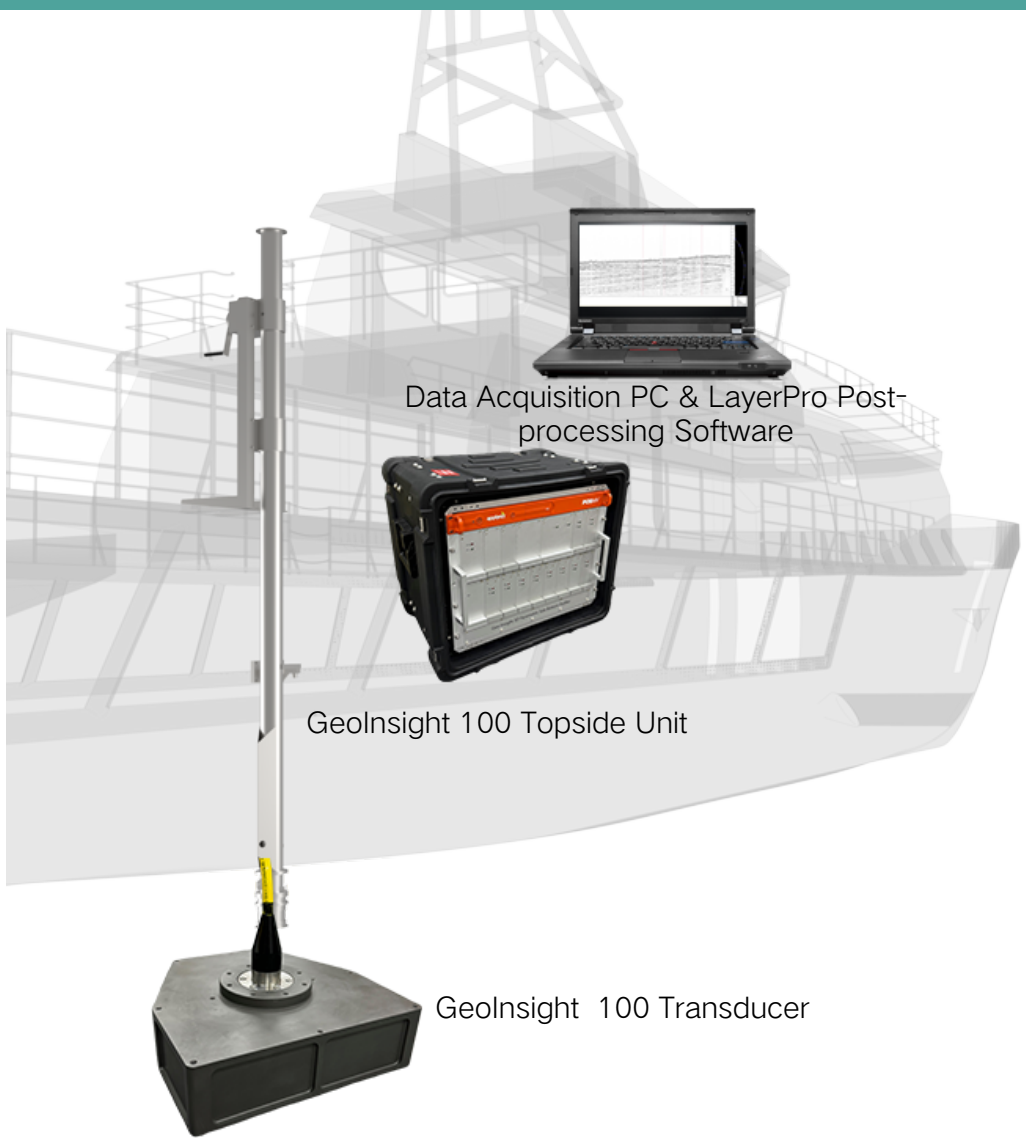
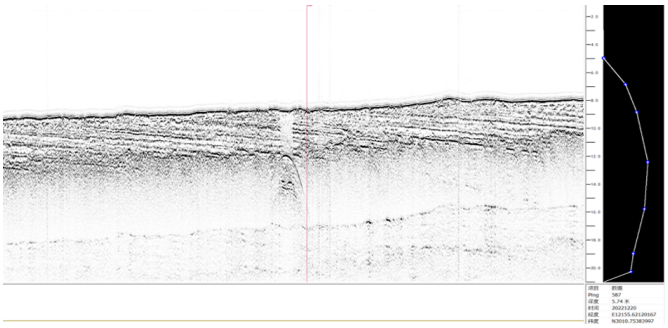
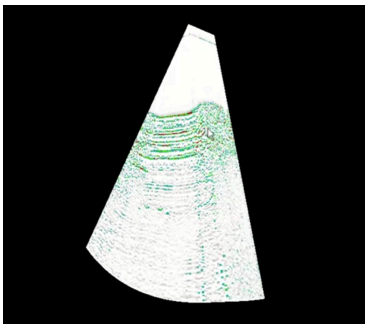
System Scheme of GeoInsight 100 3D SBP System



Data Examples by GeoInsight 100 3D SBP System



Pipeline Survey in 2D Mode



Real-time 3D View

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