



GeoScope 100 Parametric Sub-bottom Profiler

Description

As the key member of GeoScope series parametric sub-bottom profiler manufactured by Ocean Physics, GeoScope 100 uses a primary frequency of 100 kHz with wideband secondary frequencies. GeoScope 100 has great penetration and long operation range while ensuring high data quality. With superb performance, GeoScope 100 can be used for underwater sub-bottom profiling and precise bathymetry.

GeoScope 100 is equipped with a IP67 water-proof compact topside unit, making it an ideal choice for installation on small vessels or vessels of opportunity for challenging project.

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 monitoring

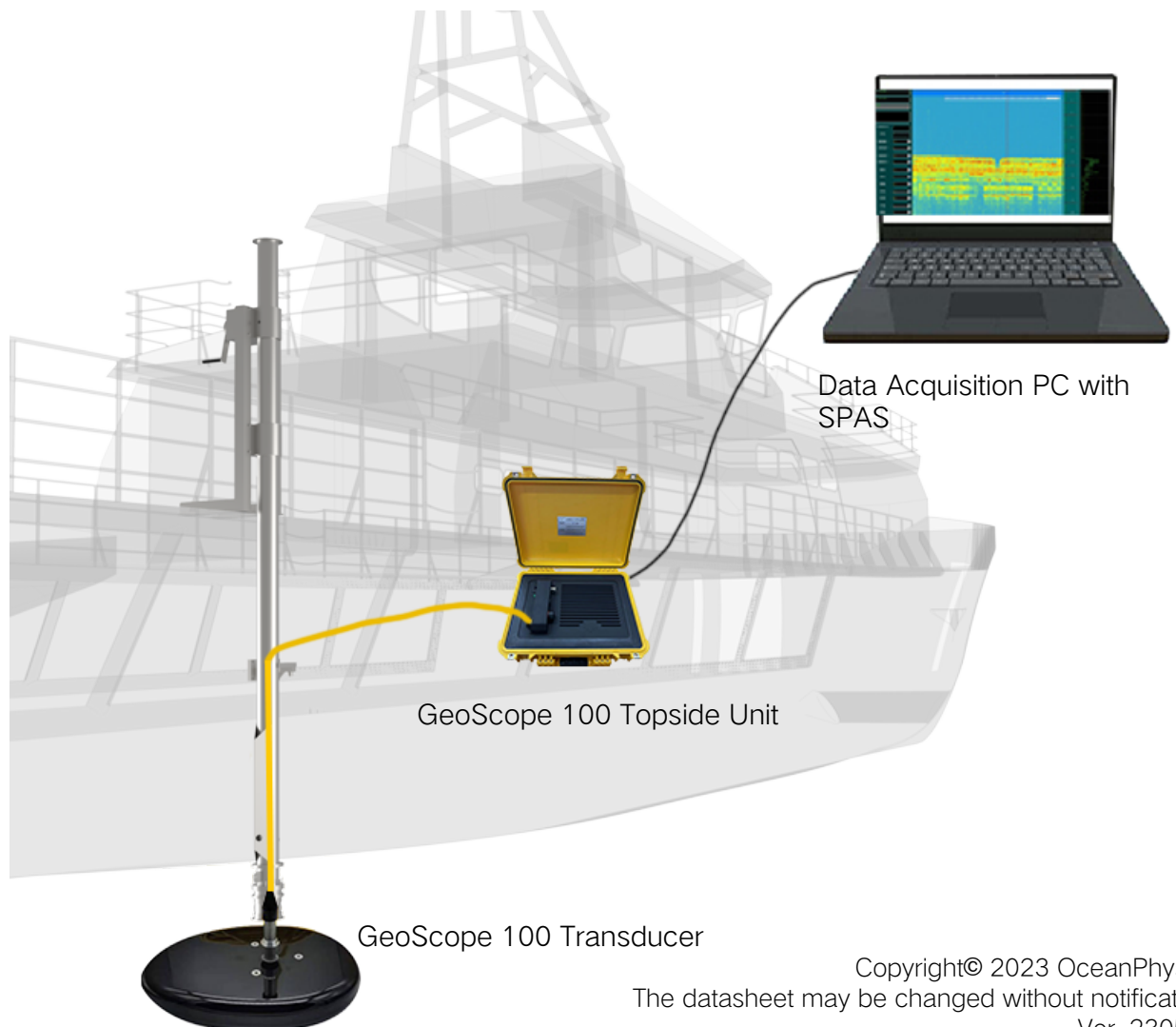
Features

- ▶ High bandwidth portable transducer
- ▶ Compact and portable IP67 topside unit
- ▶ Experienced parametric technology during decades of R & D
- ▶ Easy to install and operate
- ▶ Great penetration and long operation range
- ▶ All-in-one design suitable for various vessels
- ▶ Optional high-resolution bathymetry

Technical Specifications of GeoScope 100

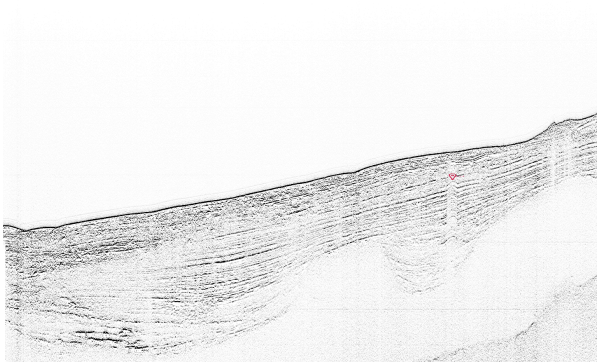
Technical Specifications	
Primary Frequency	85 - 115 kHz
Secondary Frequency	5 - 25 kHz
Pulse Length	0.05 - 1 ms
Pulse Type	CW, Chirp
Ping Rate	Up to 20 ping/s
Beamwidth @ Primary Frequency	~ 5 deg
Beamwidth @ Secondary Frequency	5 -6 deg
Source Level @ Primary Frequency	> 238 dB/uPa@1m 100Khz
Source Level @ Secondary Frequency	> 194 dB/uPa@1m 20Khz
Dymanic Range	> 110 dB
Range Resolution	< 4 cm
Sediment Penetration	< 40 m (depend on sediment type and noise)
Water Depth Range	< 200 m
Heave / Roll / Pitch Compensation	heave (depend on external sensor data)
Bathymetry resolution(optional)	2.5 cm
Physical Specifications	
Power Consumption	less than 150W
Power Supply	24VDC or 220VAC to 24VDC
Communication	Ethernet
External Sensors	GPS, IMU
Dimension and Weight of Transducer	362 x 240 x 50 mm , 8 kg
Dimension and Weight of Topside Unit	500 x 400 x 190 mm , 11.2 kg
Protection Level of Topside Unit	IP67
Data Acquisition and Post-processing Software	SPAS as standard, compatible with other 3rd party software. such as SonarWiz

System Scheme of GeoScope 100

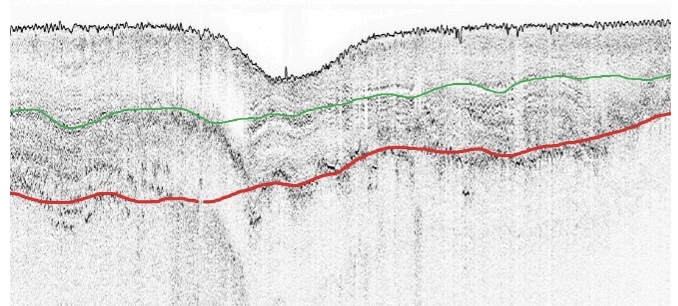


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Data Examples by GeoScope 100



Pipeline Survey in Zhoushan, China
(Click to see more examples)



Silt Investigation in Tai Lake
(Click to see more examples)