



## GeoScope 200/300 Parametric Sub-bottom Profiler

### Description

With single beam parametric array, GeoScope 200/300 features its compact and portable design, suitable for underwater sub-bottom profiling and precise bathymetry.

GeoScope offers primary frequency options of 200 kHz and 300 kHz, both of which generates wideband secondary frequencies. GeoScope 200/300 can acquire bathymetry and penetration data simultaneously.

The standard housing of transducer has 300m, 2000m and 6000m rated options and can be customized if necessary. The compact design makes it ideal for ROV, AUV or other subsea platform integration.

### 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
- ▶ Experienced parametric technology during decades of R & D
- ▶ Primary frequency options of 200 kHz or 300 kHz
- ▶ Easy to install and operate
- ▶ Various options of transducer housing for different platform integration
- ▶ Optional high-resolution bathymetry

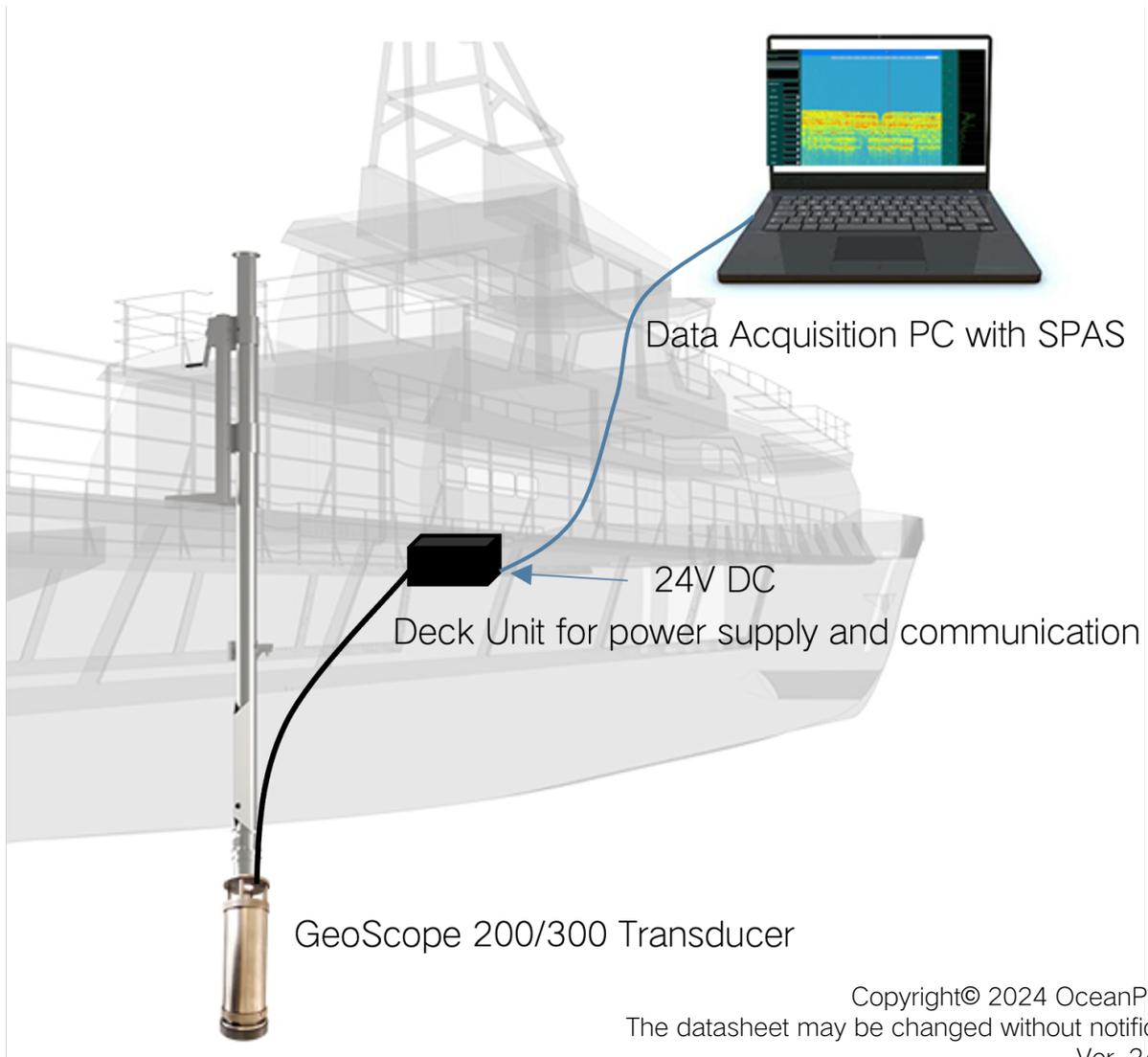


# Technical Specifications of GeoScope 100

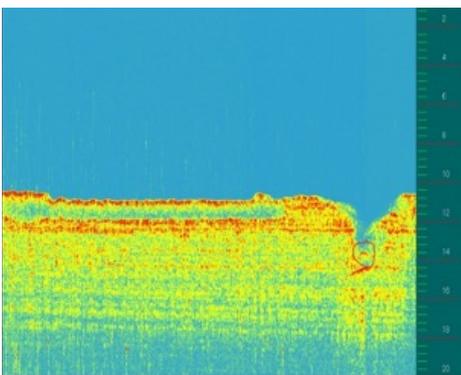
Technical Specifications		
Model	GS-200	GS-300
Primary Frequency	180 - 220 kHz	270 - 330 kHz
Secondary Frequency	10 - 35 kHz	10 - 35 kHz
Pulse Length	0.05 - 1 ms	0.05 - 1 ms
Pulse Type	CW, Chirp	CW, Chirp
Ping Rate	up to 10 ping/s	up to 10 ping/s
Beamwidth @ Primary Frequency	~ 3.8 deg	~ 3.6 deg
Beamwidth @ Secondary Frequency	3.4 - 4 deg	4 - 5 deg
Source Level @ Primary Frequency	> 238 dB/uPa@1m 100kHz	> 238 dB/uPa@1m 100kHz
Source Level @ Secondary Frequency	> 194 dB/uPa@1m 20kHz	> 194 dB/uPa@1m 20kHz
Dymanic Range	> 110 dB	> 110 dB
Range Resolution	< 4 cm	< 4 cm
Sediment Penetration	< 25 m (depend on sediment type and noise)	< 15 m (depend on sediment type and noise)
Water Depth Range	< 100 m	< 50 m
Heave / Roll / Pitch Compensation	heave (depend on external sensor data)	heave (depend on external sensor data)
Bathymetry Resolution	1.25 cm	0.8 cm

Physical Specifications		
Model	GS-200	GS-300
Power Consumption	less than 35W	less than 35W
Power Supply	24VDC or 220VAC to 24VDC	24VDC or 220VAC to 24VDC
Communications	Ethernet, RS485 to USB, PC control	Ethernet, RS485 to USB, PC control
External Sensors	GPS, IMU	GPS, IMU
Dimension and Weight of Transducer	415 mm x D120 mm, 9 kg	415 mm x D110 mm, 8 kg
Materials of housing	Titanium or stainless optional	Titanium or stainless optional
Data Acquisition and Post-processing Software	SPAS as standard, compatible with other 3rd party software. such as SonarWiz	SPAS as standard, compatible with other 3rd party software. such as SonarWiz

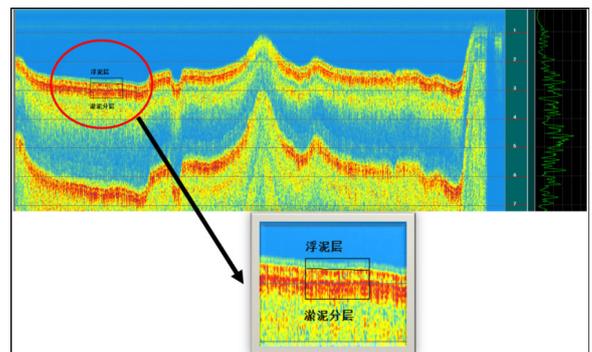
## System Scheme of GeoScope 200/300



## Data Examples by GeoScope 200/300



Pipeline Survey data replay in SPAS



Silt and Mud Investigation of a river  
( Click to see more examples )