



New feature!

WiFi data transfer

Extra output!

Static undrained shear strength (S_u)

Visualizing sediment layer thickness and determining soil strength

Instant data visualization



Fast and light sediment profiling system

The GraviProbe is a free fall impact instrument, characterising the underwater sediment layers during intrusion. Under its own weight it accelerates and penetrates fluid and consolidated sediment layers. The GraviProbe is able to very accurately measure the thickness of the fluid mud and consolidated mud layers, even in gassy environments.

The soil strength conditions of the intruded sediment layers are determining the probe's dynamical behavior.

The data acquired from on-board accelerometers and pressure sensors is feeding a dynamical model which determines the geotechnical parameters of the intruded soil (depth, undrained shear strength (dynamic and static S_u) and dynamic cone penetration resistance).

Benefits

Multiple parameters in a single instrument

Lightweight, compact and robust

Fast, continuous and autonomous measurement

Slim instrument, deep intrusion and limited disturbance of the medium

Insensitive for gassy or disturbed medium

Features

Simultaneous measurement of thickness, dynamic cone penetration resistance and dynamic & static undrained shear strength

Fast sampling rate (5120 Hz)

WiFi communication

Internal storage (microSD)

Long battery life (Li-Ion, 10-12h autonomy)

Software

Import data

Process data

Visualize & export data

Configure GraviProbe

Configure & import GPS-data

Automatic data upload in platform Atlantis



Applications

Classification of mud and soil layers

Determination of the nautical depth

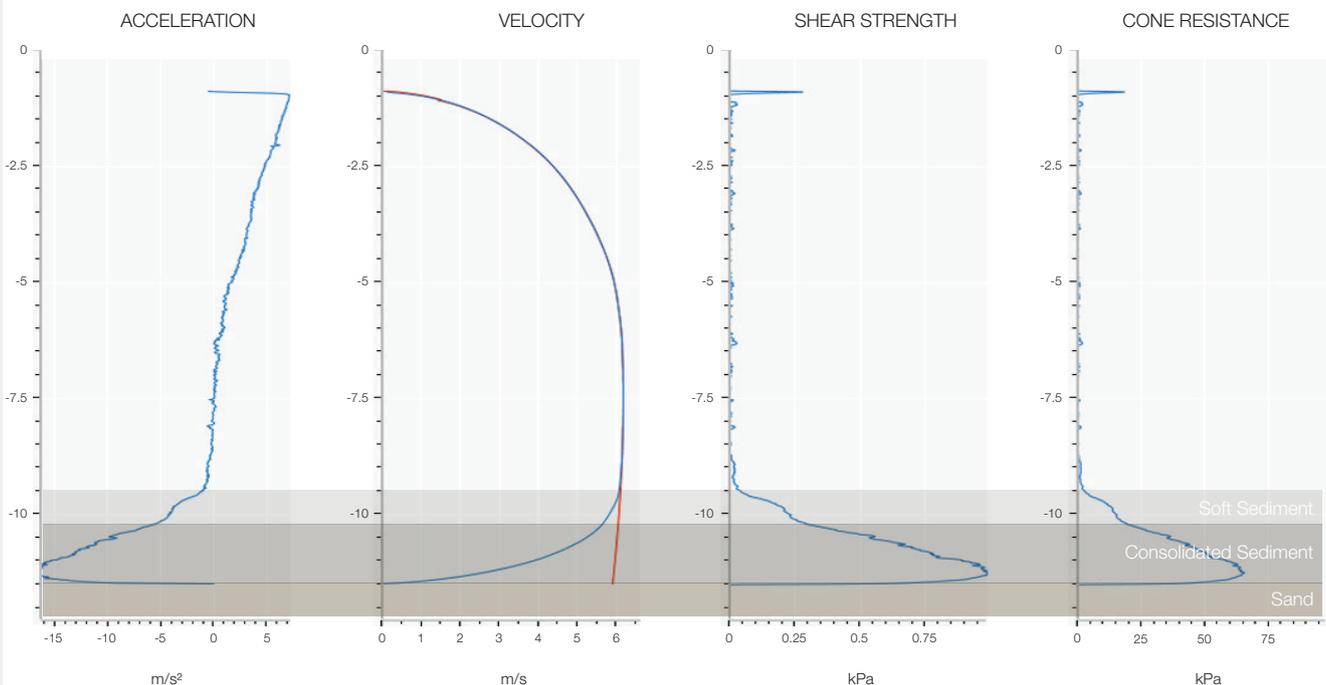
High accurate layer thickness measurement

Calculation of dredging volumes

Characterising echo sound and acoustic data

Complementary soil analysis during CPT and core sampling

Example output



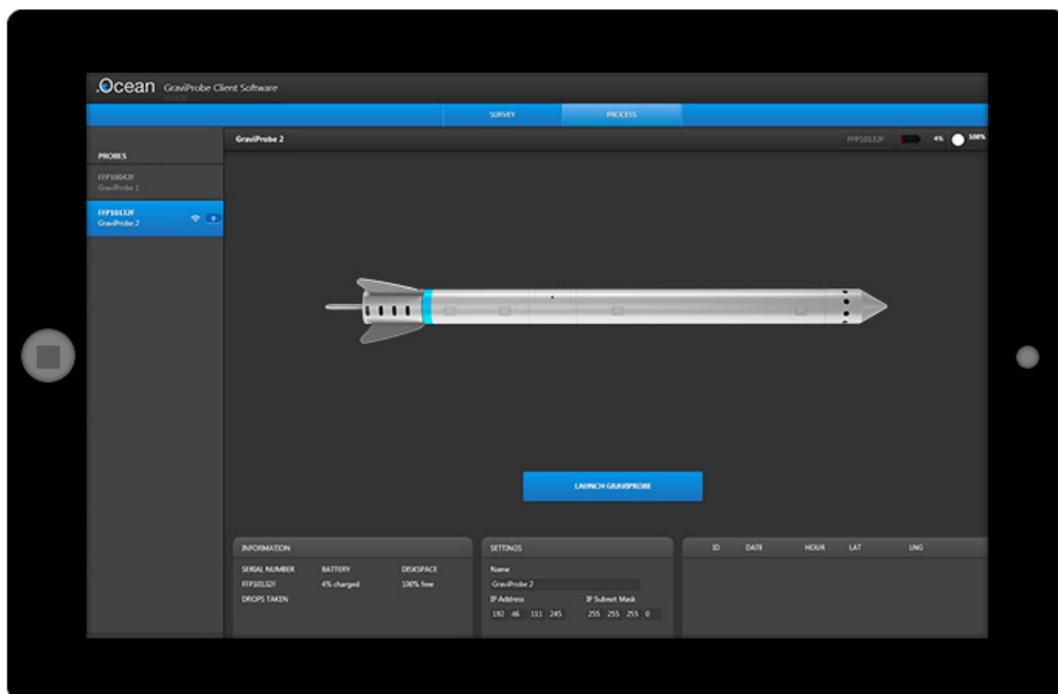
Specifications	Depth	Range	0 - 3.5 or 10	bar
		Accuracy	0.01	%
	Dynamic Cone Penetration Resistance	Range	0 - 100000	Pa
	Dynamic Undrained Shear Strength	Range	0 - 10000	Pa
	Static Undrained Shear Strength (S _u)	Range	0 - 5000	Pa
	Maximum Impact	Range	0 - 70	G

Data	Acquisition	Sample Rate	5120	Hz
	Communication		Wi-Fi	
	Memory	Internal storage	Micro SDHC 16	GB

Electrical	Battery	Type	3x	Li-Ion
		Volt	11,1	V
		Ampere	2800	mAh
Autonomy		10-12	hours	
Charge Type		AC/DC charger		

Physical	Material	Marine Grade 18/10 Stainless Steel (type 316) housing, polycarbonate & composite sensor components. Delrin and aluminium		
	Size	Diameter	50	mm
		Length	960	mm
		Weight	8	kg

Software Ruggedized tablet supplied with Android App





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