

PROFILER II

The Profiler II design builds on Satlantic's experience with previous generations of profiling instrumentation. It offers researchers the unique ability to use this system as a free fall profiling device or in conjunction with a detachable float for near-surface measurements (HyperTSRB). The Profiler II Hub also allows users the option of multispectral or hyperspectral sensor integration as well as the ability to interchange optical sensors. This flexibility and power makes the Profiler II the most versatile platform for measuring optical properties in a wide range of aquatic environments.

Optional integration of a conductivity sensor and the WET Labs Eco series sensors offer a new combination for concurrent determination of Inherent Optical Properties. These additional sensors are available in both the profiling and surface modes.

Free Fall Mode

The Profiler II is a superior slow descending, free fall vehicle featuring an improved pressure sensor. With the use of Satlantic's analytical software (ProSoft), the Profiler II offers derived information such as, water-leaving radiance, remote sensing reflectance, energy fluxes, photosynthetically active radiation (PAR) and diffuse attenuation coefficients. These data can be used for environmental monitoring activities, satellite CAL/VAL, and bio-optical algorithm development. The Profiler II now allows investigators to visualize relationships between AOPs and IOPs in a single dataset. As with all of Satlantic's profiling devices, the Profiler II addresses the issues of self-shadowing and ship induced disturbances while offering a wide dynamic range in an easy to deploy package.



Surface Mode

The Profiler II system comes complete with a molded flotation collar that is easily mounted to the profiling frame for real time, near-surface measurements. Several small lead disks are also provided for adjustable ballast to fine tune the Profiler II attitude while deployed in surface mode. Average tilts of less than 5 degrees are attainable in most deployment conditions. Upwelling radiance and irradiance measurements can be collected as close as 5 cm from the sea surface.

PROFILER II SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

A/D Conversion:	16 bit ADC
Integration time:	Auto range 16 to 2048 msec
Sample rate:	12Hz max
Data rate:	57.6 kbaud
Telemetry interface:	RS-422 / RS-232
Power requirements:	Powered through MDU-200 & 12VDC PS

PHYSICAL CHARACTERISTICS

Size:	Diameter 48mm
Weight:	18lbs / 8.2kg
Descent rate:	0.1 - 1.0m/sec (user adjustable)
Operating temperature:	-2.5 to 40 degrees
Depth Rating:	220 m

ANCILLARY SENSORS:

External Temperature Sensor

Range:	-2.5 to +40°C
Accuracy:	0.020°C
Precision:	0.003°C

Druck Pressure Sensor

Range:	300psi (other ranges possible)
Accuracy:	0.1 m
Precision:	0.01 m

Tilt Sensor

Linear range:	+/- 45°C
Accuracy:	<0.2°C

Optional Sensors

WET Labs ECO Series	ECO-BB2F -SAT ECO-FL -SAT ECO-FL-NTU -SAT ECO-VSF -SAT
---------------------	---

Conductivity Sensor	
Accuracy	0.1 psu