# UB-SediFlow

## the Hyperband Acoustic Profiler

Acoustic backscattered echo profiles for suspension and sediment transport studies

## Features

- Mobile **multi-frequency** acoustic profiler
- **Backscattered echo profile** measurement along 4 acoustic beams
- Composed of 2 hardware modules connected by a cable :
  → 1 acoustic module (incl. **4 transducers** + acoustic electronic board), **waterproof** down to 20 m
  → 1 **logger** (acquisition and communication module), splashproof
- The logger communicates through **wifi** and a mobile version can be powered on **battery** (12 hours autonomy with a 20Ah powerbank)
- **Trigger** input/output for synchronisation with other instruments
- **Web interface** for parameter setting, real-time data visualization management and record management (includes start time, stop time and interval), data provided in **binary** format
- Management of up to 9 sets of parameters (configurations)
- The logger can be used in a **fixed installation** if connected to a power supply (in a dry environment)

## Applications

- **Sediment** monitoring in river, lake and sea
- Mud monitoring in WWTP
- **Suspension** study in tank

Our devices are available for rent, for lease and for sale.

## Contact

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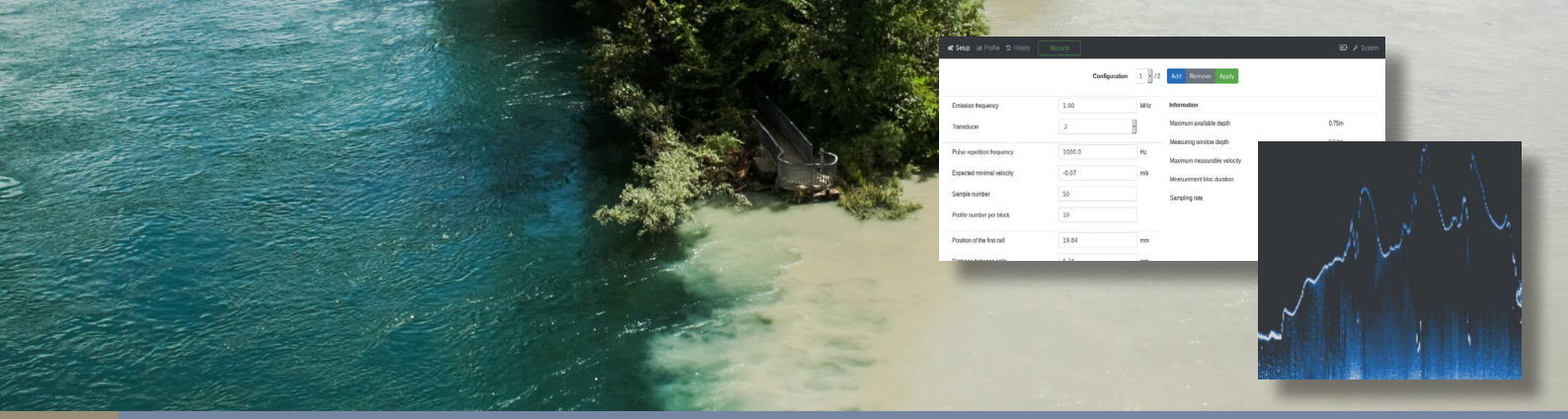
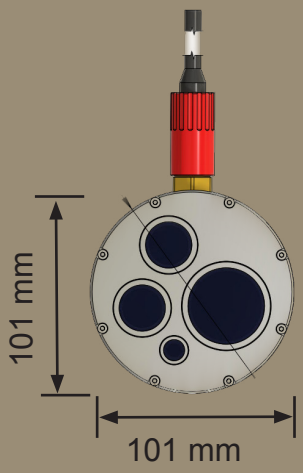
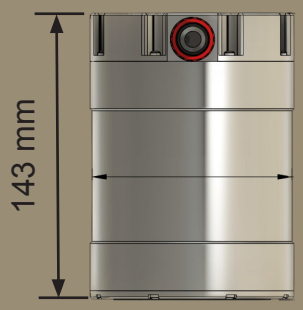
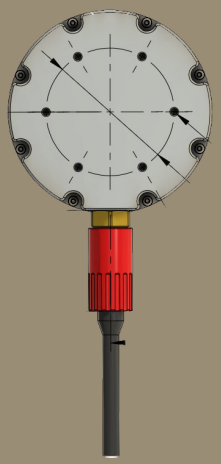


## Technical specifications



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|---|---|
| **Measurement Performances** | |
| Sampling range | 0.05 to 8 m |
| Number of cells | 2 to 200 |
| Cell size | 3 mm to 10 cm |
| Sampling rates | Up to 5 average profiles per second |
| Number of configurations | 9 |
| Trigger IN/OUT | Yes |
| **Acoustics** | |
| Transducer | 4 broadband transducers centered on 0.5 ; 1 ; 2 ; 4 MHz with active diameters of resp. 35 ; 20 ; 20 and 10 mm |
| Frequency range | 0.35 to 5.00 MHz |
| Beam width | 1.5° to 6° (depending on the transducer and on the emitting frequency) |
| Emission voltage | 50V typical |
| **Physical** | |
| Dimensions | 101 x 101 x 143 mm (acoustic module) |
| Weight | 3.3 kg (acoustic module) |
| Cable | Up to 20 m (between acoustic module and logger) |
| **Data Management** | |
| Communication | Wifi connection to logger<br>Modbus through RS485 between both modules |
| Internal data logger | 1.2 Go |
| File format | Binary (.udt) |
| Echo | Backscattered echo RMS amplitude per beam and cell |
| **Power** | |
| Input | 12V DC (for the acoustic module)<br>5V DC (for the logger) |
| Consumption | Typical 2W (for the acoustic module)<br>Typical 1.5W (for the logger) |
| ON/OFF LED | Button and indication LED (on, off, charging) on the logger |