LIVE FRESHWATER TELEMETRY

MODEL HH2 · 2026

Riverkin sensor

A connected sensor that streams continuous river data from anywhere on Earth — built on peer-reviewed science.

Key benefits

01 / WHY RIVERKIN

01 Continuous SSC in g/L
Direct suspended-sediment concentration — not just turbidity — at minute-level cadence.

02 Live remote telemetry
Stream from anywhere. No site visits to retrieve a logger, no gaps during high-water events.

03 Global coverage
LoRaWAN where the network reaches; satellite where it doesn't. Same sensor, swappable radio.

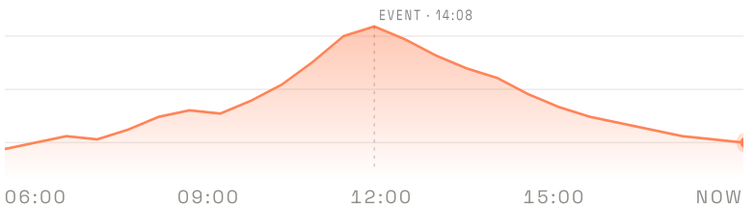
04 Trusted by experts
Validated and published in CATENA, HardwareX, and Scientific Reports. Methods are open.

TELEMETRY · STATION HH-2 · INN RIVER, CH

STREAMING · 1 MIN

SUSPENDED SEDIMENT CONCENTRATION · G/L

0 — 4.0



SSC · NOW	2.84 g/L
TURBIDITY	1500 NTU
WATER LEVEL	1.42 m
WATER TEMP	7.1 °C

Applications

02 / WHERE OUR SENSOR IS DEPLOYED

Hydropower
Compliance monitoring for flushing events
Auditable, minute-level SSC records that prove flushing operations stay within regulatory sediment limits.

Flash floods
Early warning for extreme-rain events
Live water level and sediment-load surges trigger alerts upstream of vulnerable infrastructure.

Turn-key
Critical water data, out of the box
Sensor, telemetry, and dashboard delivered as one package — no integrator, no firmware work.

Configure your station

03 / SENSOR · CONNECTIVITY

SENSOR PACKS

PARAMETERS

PARAMETER	S0	S1	S2
Temperature, Water Level	●	●	●
Turbidity	○	●	●
Suspended Sediment Concentration*	○	○	●

* requires site-specific calibration

CONNECTIVITY

TELEMETRY RADIOS

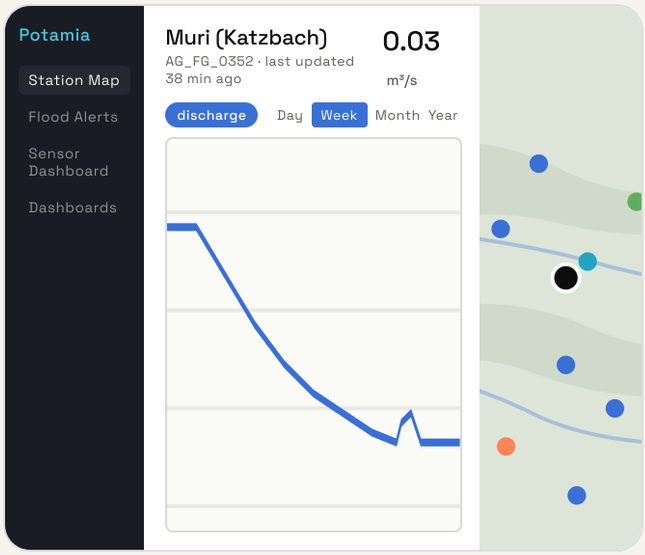
FEATURE	C0	C1
Technology	LoRaWAN	Satellite
Coverage	+	+++
Interval (1-yr battery)	15 min	60 min
Affordability	+++	++

Data plans

03 / HOW YOU RECEIVE YOUR DATA

DATA PLANS — HOW YOU RECEIVE YOUR DATA

PLAN	D0	D1	D2	D4
Quarterly e-mail (CSV)	●	●	●	●
API for system integration	○	●	●	●
Visual dashboard	○	●	●	●
Custom alerts & indicators	○	○	●	●
Quality assurance & control	○	○	●	●
Catchment network — aggregated nearby stations	○	○	○	●



POTAMIA · LIVE STATION MAP & CHARTS — D1 +

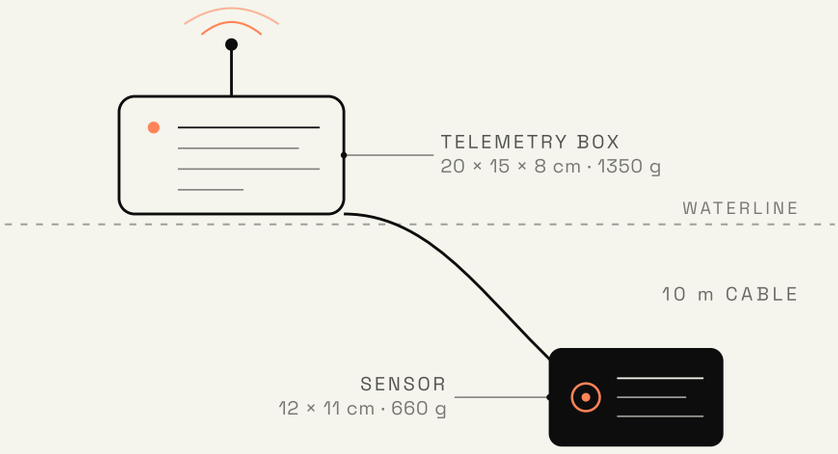
Specifications

04 / TECHNICAL

Temperature range	−5 to 35 °C	Data transmission	LoRaWAN or GlobalStar
Temperature accuracy	± 1.5 °C	Min. measurement interval	1/min (LoRa) · 15/min (Sat)
Temperature resolution	< 0.1 °C	Min. transmission interval	5 min (LoRa) · 60 min (Sat)
Pressure range (water level)	0.3 – 4 bar	Power supply	Li-Ion 2S5P · 7.4 V · 17.5 Ah
Pressure accuracy	± 1 mbar @ 0–65 °C	Battery life — Sat, 60 min	≈ 1 year
Pressure resolution	0.1 mbar	Battery life — LoRa, 15 min	≈ 1 year
Turbidity range	0 – 4000 NTU	Operating water temp.	0.5 – 50 °C
SSC range	0 – 20 g/L	Operating air temp.	−20 – 60 °C

Physical dimensions

05 / FORM FACTOR



PART	SIZE	WEIGHT
Sensor (in water)	12 × 11 cm	660 g
Transmission cable	10 m (≤ 20 m)	550 g
Battery / telemetry box	20 × 15 × 8 cm	1 350 g
Total system	—	**2 560 g**

Trusted by experts

06 / PUBLICATIONS

2024 Bakker et al. — *Intercomparison of optical scattering turbidity sensors for a wide range of suspended sediment types and concentrations* — CATENA

2023 Droujko et al. — *Ötz-T: 3D-printed open-source turbidity sensor with Arduino shield for suspended sediment monitoring* — HARDWAREX

2022 Droujko & Molnar — *Open-source, low-cost, in-situ turbidity sensor for river network monitoring* — SCIENTIFIC REPORTS

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