NEROXIS by VEOLIA

SWARM

Safety of surface water resources

WOULD YOU LIKE…

Protect
the asset of surface water resources ?

Detect
rapidly the variations in water quality ?

Limit
the economic impacts of any pollution ?

Identify
risks and critical points likely to impact water resources in the region ?

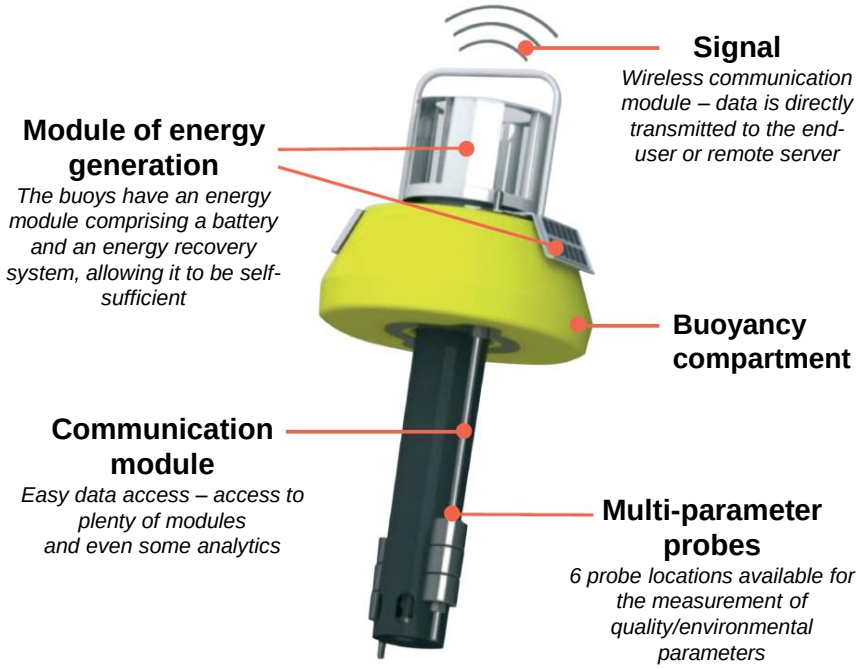
Manage
your quantitative and qualitative strategy for the management of water resources ?

Secure
your water resources against accidental contamination or malicious acts ?

Neroxis proposes the SWARM service offer designed around the Kapta™ 4000 in-line multiparameter probes

The **SWARM** system is an innovative solution for monitoring the quality of surface water. The buoy measures the water quality parameters and transmits data in real time for analysis. On top of the measuring system, the buoy comprises an anchor, a float and an energy-generating module allowing self-sufficiency. The buoy can be installed directly and easily on any type of body of water or watercourse.

Using the SWARM system, the water supplier can continuously monitor changes in the seven key parameters for the quality and condition of surface water: conductivity, temperature, speed, depth, dissolved oxygen, pH, turbidity, organic matter, chlorophyll A, phycocyanin and phycoerythrin.



SWARM has been designed scalable, flexible and modular to suit different operating solution. Its compactness allows easy installation and limited maintenance. SWARM doesn't need civil engineering, power supply or chemical reactive.

SWARM is the effective and innovative answer for monitoring the surface water resource

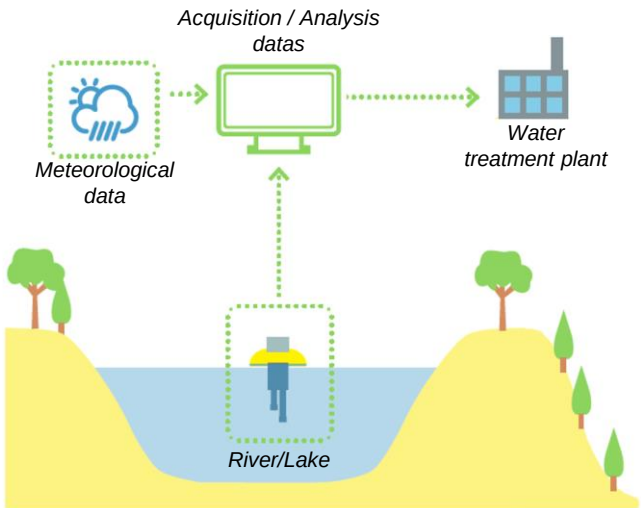
General specifications

- Security and safety of surface water resources
- **Measurement of quality parameters**: turbidity, organic matter, water temperature, dissolved oxygen, conductivity, pH, chlorophyll A, phycocyanin, phycoerythrin
- **Measurement of environmental parameters**: water depth, flow speed, solar resource, wind speed, air temperature
- IKA system for the cleaning of the probe Kapta™4000-OT3 by water jet
- Autonomous buoy with instrumented probe holder (6 probe locations available)
- Remote data communication, wireless

Probe KAPTA™ 4000-FC3	Probe KAPTA™ 4000-DT3	Probe KAPTA™ 4000-OT3	Probe KAPTA™ 4000-O2	Sonde Kapta™ 4000-CPP
1. Conductivity • 4-electrode cell • Range: 100-2000 $\mu S.cm^{-1}$ • Resolution:1 $\mu S.cm^{-1}$ **2. Temperature** • Digital sensor • Range: -10 to 50 °C • Resolution: 0.1 °C **3. Flow speed** • Hot wire • Range: 0 to 10 m/s • Resolution: 0.01 m/s	**1. Depth** • Ultrasound • Range: 0.5 to 10 m • Resolution: 0.1 m **2. Temperature** • Digital sensor • Range: -10 à 50 °C • Resolution: 0.1 °C **3. Tilt** • Accelerometer • Range: 0 to 90° • Resolution: 1°	**1. Organic matter** • UV 254 • Absorbance of the incident light • Range: 0 - 100 m^{-1} • Resolution: 0.1 m^{-1} **2. Turbidity** • Nephelometry 860 nm • Range: 1 - 40 FNU ; 40 - 400 FAU • Resolution: 0.1 FNU/FAU **3. Temperature** • Digital sensor • Range: -10 to 50°C • Resolution: 0.1 °C	**1. pH** • Luminescence • Range: pH 6-8 • Resolution: 0.1 pH unit **2. Dissolved oxygen (mgO_2/L)** • Luminescence • Range: 0.5 to 15 mgO_2/L • Resolution: 0.1 mgO_2/L **3. Temperature** • Thermo-resistance • Range: -30 to 150°C • Resolution: 0.1 °C	**1. Chlorophyll A** **2. Phycocyanin** **3. Phycoerythrin** • Fluorescence measurement • Range: 0-100 µg/L • Resolution : 0.1µg/L

Knowing the water quality in real time

Coupled with weather data, SWARM data are an excellent indicator of the water quality of the resource. It also allows to anticipate events such as algal blooms and to adapt the drinking water treatment.



Thanks to this innovative solution, Neroxis contributes to the security and safety of surface water resources and the quality of drinking water

NEROXIS

NEROXIS SA | Rue Jaquet-Droz 1 | CH-2002 Neuchâtel | SWITZERLAND
Email: kaptadmin.vws@veolia.com | Tel: +41 32 720 57 57
www.neroxis.ch