



## BLUE CLOCK

### ULTRA-LOW ENERGY PRECISION CLOCK FOR UNDERSEA EQUIPMENT

The aim of the BLUE CLOCK project is to develop a high-precision, ultra-low energy oscillator for undersea equipment.

GPS synchronisation is not available underwater and so high-precision clocks are essential for any efficient undersea system, such as autonomous drones and acoustic or seismic recorders.

In particular, the Blue Clock will ensure efficient underwater navigation (without GPS), providing temporal synchronisation of equipment and thus highly accurate positioning.

So-called atomic clocks are the most efficient but consume high levels of energy – 10W or more. They are not compatible with battery-powered subsea applications in terms of cost or consumption. The development of a compact, low-energy oscillator will mean much longer missions can be planned, and the overall performance of embedded undersea systems enhanced.

#### Partners

##### Companies

Syrlinks, Cesson-Sévigné [Project Developer]  
RTSys, Caudan

##### Research center

Institut FEMTO-ST, UMR 6124 Université de Franche-Comté, Besançon

#### Funder

Direction Générale de l'Armement

#### Labelisation

06/09/2019

#### Overall budget

1047 K€