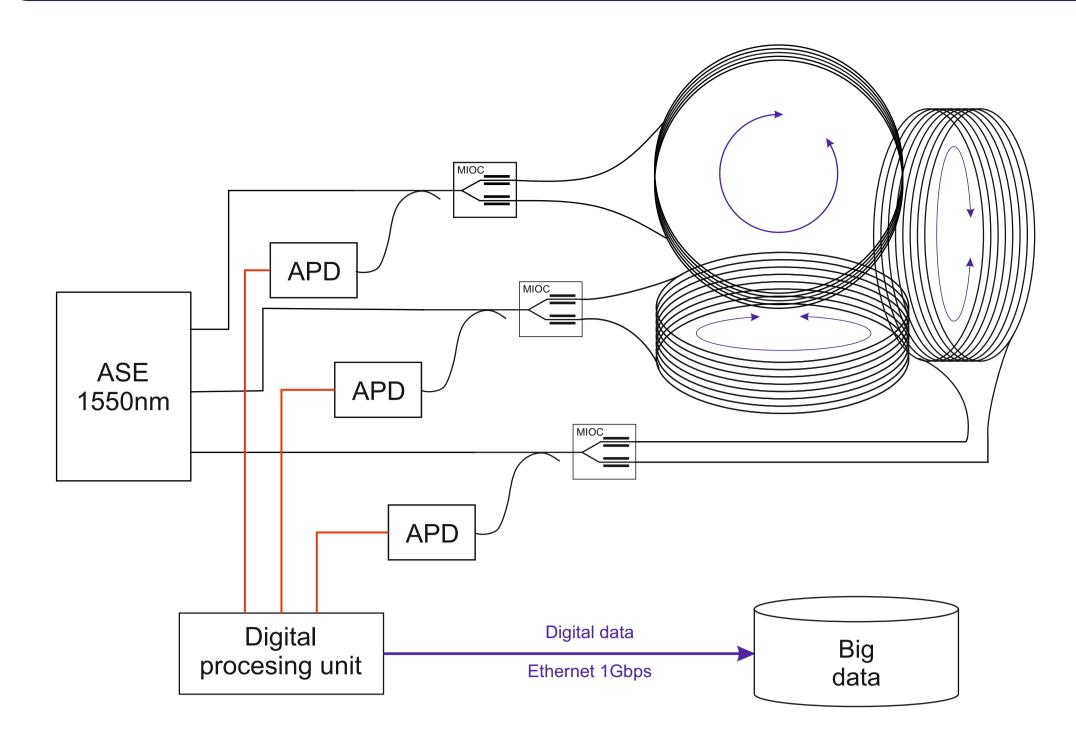




The high-frequency Fibre Optic Gyroscope and The network of synchronised Ultra Sensitive Seismographs

https://fosrem.eu

## Multipurpose Earth & Space Photonic Sensor with Big Data output next generation FOG and seismograph for ROTATIONAL seismology



The sensor operates as a result of the measurement of a difference between two interfering light beams propagating around a closed (very long) optical path, in opposite directions,

- Unique high-accuracy technology, so far available from 2 countries only;
- Sagnac effect, independent of Earth Gravity, for which the only frame of reference is Einstein's space-time;

The Sensor produces high-resolution Big Data output for the next step of profile computing. When synchronized in the time domain, the sensors provide unique new 3D information not available from a single sensor. In addition, Rubidium's high-frequency option improves the resolution of frequency domain operations, providing so far undiscovered data.

The main business profiles are Microseismic sensing (gas & oil, thermal water, mining industry), military, autonomous vehicles (autonomous cargoships/drones/plains/robots), industry asset management.

## FOS6 a new 3 axis, high speed, rotational seismograph with precision time synchronisation.

## Technical parameters

2,5 \*10<sup>-8</sup> rad/s/ $\sqrt{Hz}$ 

from 0.01 to 100 Hz

of measurement data

acquisition over Internet

consumption less than 20W

360 x 300 x 295mm (sensor)

**1Gbps RJ-45 with PoE and PTP** 

processing

**Closed-loop configuration with digital** 

(TCP/UDP), PTP for time stamping, GNSS

Local and remote management and data

12 - 24 VDC, via PCU over PoE, power

Ethternet, WiFi, 4G/5G/SAT WWLAN, miniSSED

Rotational rate dynamic range **10 rad/s** 

Sensitivity Pass band

Configuration

Communication

Data storage

Interfaces

Management

Power Supply

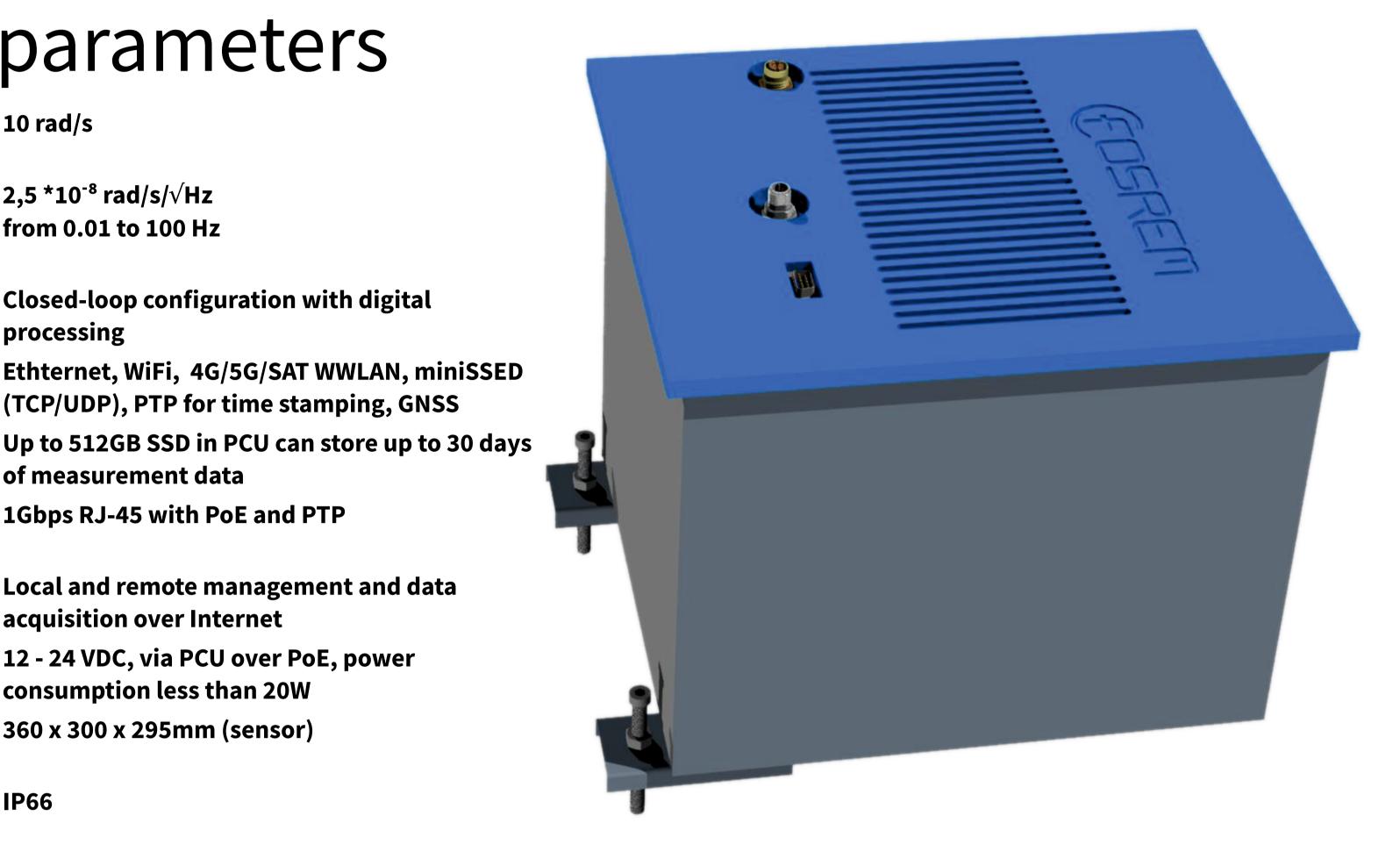
Dimensions {L x W x W}

Ingress protection

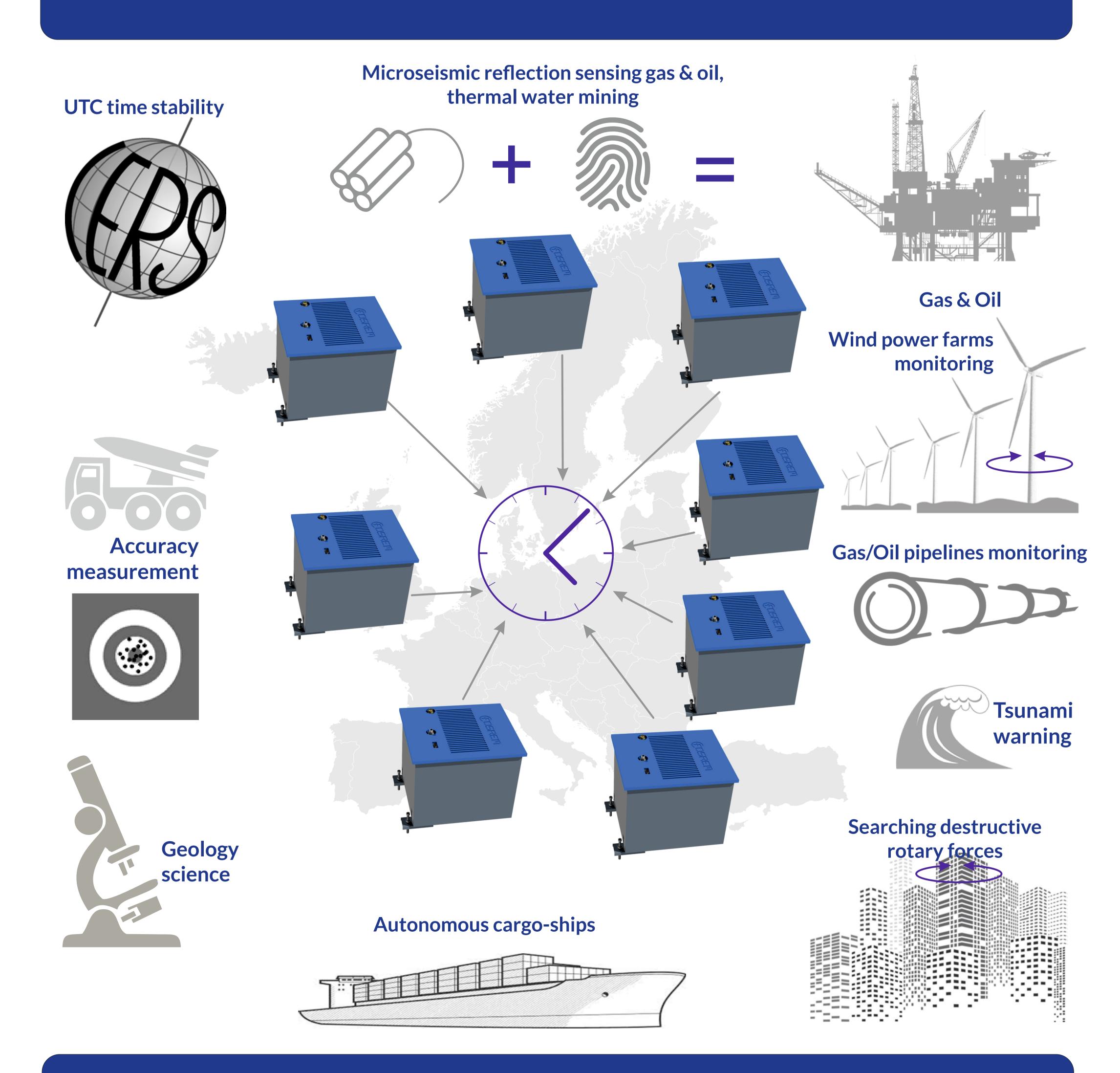
**IP66** 

Weight

20 kg (sensor)



FOSREM is a new approach to measurement of angular velocity and angles. Time Domain Networking FOSREMS provides qualitatively new data.



Atomic quality clocking 3-Axial FOG sensors for autonomous vehicles & space industry. Synchronised networking SEISMOGRAPHS for microseismic sensing (location of position). From calibration, via IMU & angle measurement up to sensing of gas/oil/thermal water.







**European Union** 

European Regional **Development Fund** 

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