



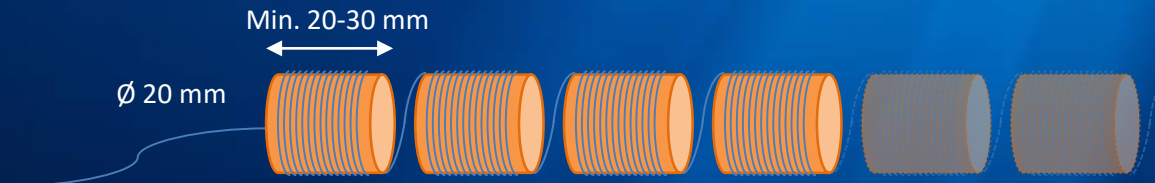
Thin Line Optical Hydrophone Array

ZonaSens Thin Line Optical Hydrophone Array

Key features

- All-optical hydrophones
- Small dimensions & lightweight
- High sensitivity & low noise floor
- Up to 30 bar pressure without active compensation
- Optical fiber based, no electronics in the array
- AUV execution possible

The ZonaSens Thin Line Optical Hydrophone Array is based on unique optical fiber sensing technology that enables small and simple hydrophones with high sensitivity and very low noise. A single, radially sensitive hydrophone can be as small as $\varnothing 20$ mm by 30 mm. The high sensitivity of the ZonaSens optical fiber sensing technology enables relative low costs, fully passive hydrophone design that can operate up to 30 bar pressure. In addition, tens of hydrophones can be connected in an array, which can be as thin and flexible as a simple garden hose. No electronics are required anywhere near the hydrophones; the interrogator can be placed kilometres away.



Femtosecond noise floor in exceptionally harsh environments is best achieved using optical fiber interferometry. Besides this technology has extremely low noise, it is all-optical and fully passive; no electrical signals are involved. For that reason the fiber can be applied in extreme high temperatures, liquid environments or in the presence of strong electrical and/or magnetic fields.

Curious to learn more?
Contact us!

Performance	
Simultaneous sensors	10 now; 100 near future
Hydrophone type	Radially sensitive
Acoustic noise floor	40 dB re 1 μ Pa/ \sqrt Hz
Sensitivity	-166 dB re rad/ μ Pa
Noise equivalent	Sea state 0
Dimensions	$\varnothing 20$ mm x 30 mm
Frequency range	10 Hz up to 10 kHz
Dynamic range	160 dB
Data output	Ethernet
Fiber type	Single mode