SYNAPTI Cam:
THE SMART CAMERA FOR REAL-TIME PROCESSING OF UNDERWATER VIDEO STREAMS
SynaptiCam is a smart camera for underwater usage. It has been developed for observing or monitoring specific underwater situations, such as the behavior of fish or suspicious objects on the sea floor. Operating on an embedded Linux system, Fraunhofer’s Deep Vision Frameworks enables the detection, classification and segmentation of objects in real-time.

Our SynaptiCam combines low power consumption, small size and easy connection of different camera units with high performance and flexibility for the processing of single images or video streams. Equipped with an optional GSM/LTE module, the result of processing can be provided in real-time.

**Technical features:**
- Low power consumption
- Full-HD resolution
- On-device image processing with directly controlled algorithms
- Bandwidth-adaptive live view
- Up to 3 camera modules

**Potential applications:**
- Detection of underwater objects, e.g. fish
- Classification of different fish species
- Segmentation of object forms

**CONTACT:**
Prof. Dr. Uwe Freiherr von Lukas  
Head of Competence Center “Maritime Graphics“

Fraunhofer Institute for Computer Graphics Research IGD  
Joachim-Jungius-Strasse 11  
18059 Rostock, Germany  

Tel: +49 381 4024-100  
uwe.von.lukas@igd-r.fraunhofer.de  
[https://igd-r.de/digital-ocean-technology](https://igd-r.de/digital-ocean-technology)