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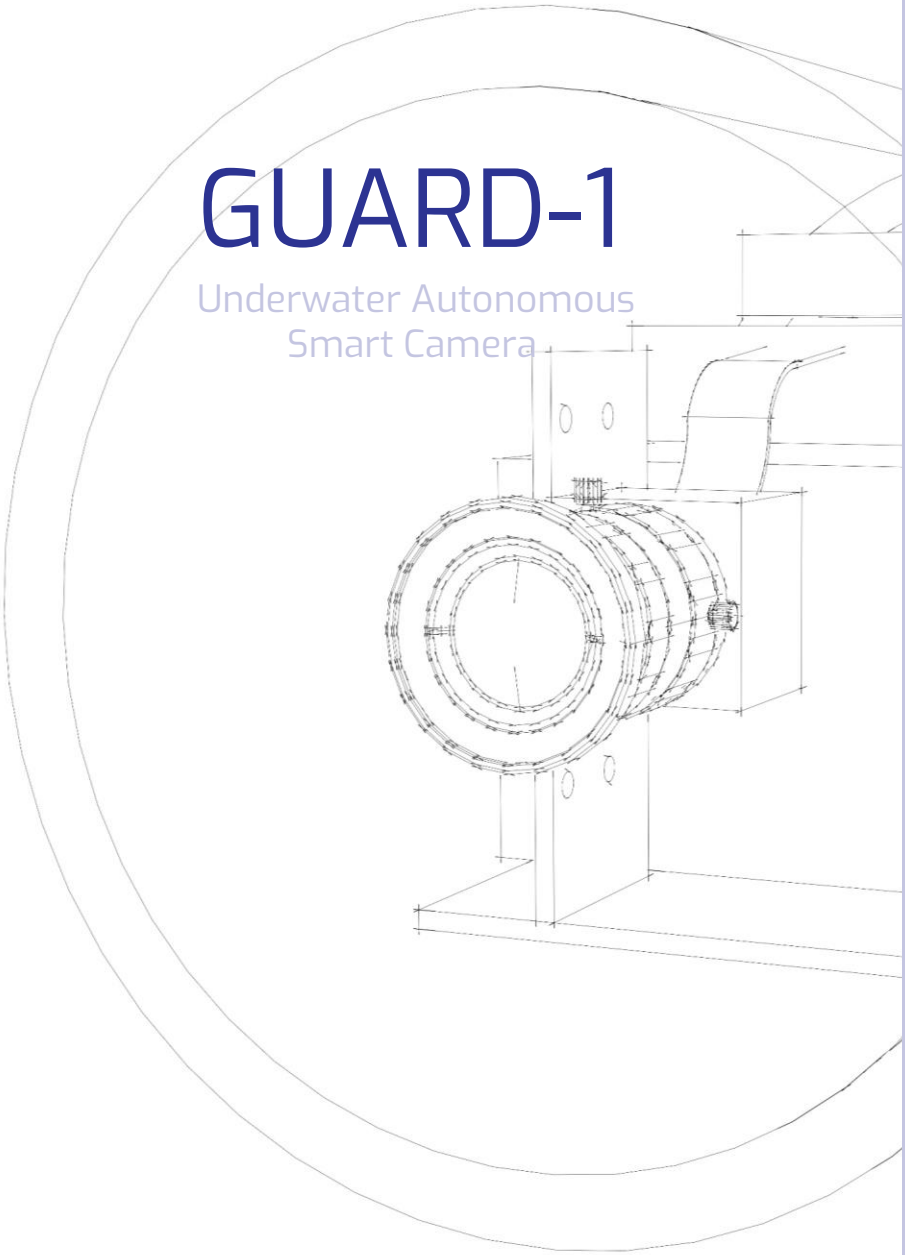
GUARD-1

Underwater Autonomous Smart Camera



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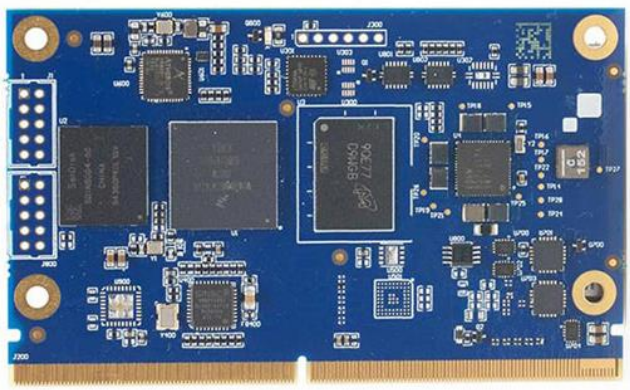

GUARD-1 is a high resolution and high sensitivity underwater camera. It is autonomous (battery operated), freely programmable frequency for time-lapse acquisition of images.

KEY FEATURES

- Adjustable image quality for deep-sea and shallow coastal areas.
- PIXALIS and SONY CMOS sensor configurations
- Onboard storage for over 10.000 images (depending on image quality)
- Linux PC board for implementation of customized processing algorithms (C++/Python)
- Incorporated lighting system for operating in absence of natural light
- Battery pack for long autonomy (> 12 months, depending on the computational load)
- Multiple mechanical configurations, deployable up to 1000 m depth
- Ethernet cable for PC data communication in shallow water deployments (1-3 m).
- Image preprocessing function library for rapid prototyping

PATENT

The system is working in accordance to the European patent EP2863257 by the National Research Council (Italy) and OnAir S.R.L. (Italy)

Multiple Optical Configuration
By Edmund Optics and Thorlabs

Carrier Board and NX ITX computing board with STM32 microcontroller

Integrated 4 channel individually controlled LED illumination system

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