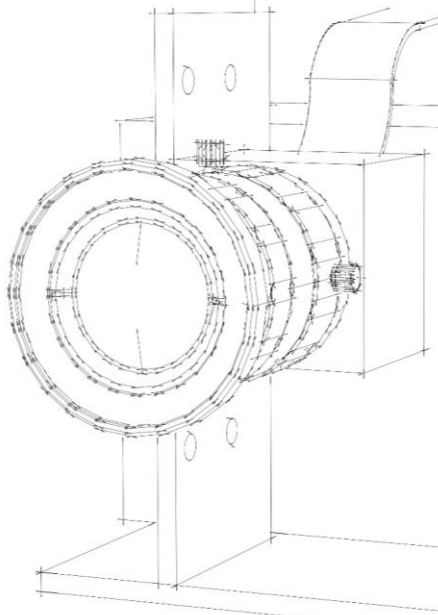
www.oengineering.eu

OENGINEERING

GUARD-1

Underwater Autonomous Smart Camera



Target

Infrastructure or environmental monitoring, in marine protected areas, coastal areas or open sea, up to the deepest and remote areas of the oceans

Applications

fixed or mobile platforms (drifter buoys, ARGO Float, sea gliders, oceanographic moorings, landers, cabled observatories) also for long-term missions.

Why

The programmable device is suitable for monitoring anthropogenic impacts and climate change effects, as well as the integrity of submerged artificial infrastructures:

Oengineering S.R.L.
(legal) Viale Quintino Sella 5/B, 36100, Vicenza, Italy
(operations) Strada Casale, 175, 36100, Vicenza, Italy
(Liguria op.) Via Enrico Albareto, 21, 16153, Genova, Italy
+39 0444 1270111
info@oengineering.eu

GUARD-1

Underwater Autonomous Smart Camera

OENGINEERING

KEY FEATURES

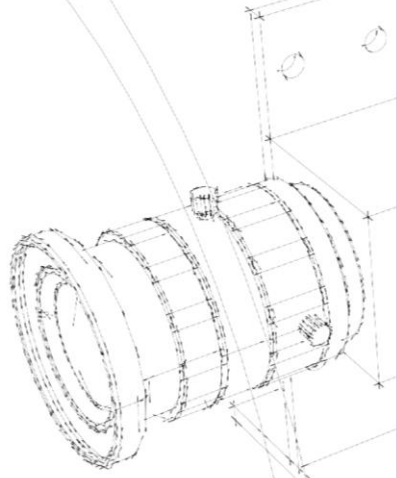
- AI autonomous system
- Freely programmable frequency for time-lapse acquisition of images
- Adjustable image quality for deep-sea and shallow coastal areas.
- PYXALIS (HDR) and SONY CMOS sensor configurations
- Onboard storage for over 10.000 images (depending on image quality)
- PC board for implementation of customized processing algorithms (C++/Python) – YOCTO OS
- Image preprocessing function library for rapid prototyping
- Incorporated lighting system for operating in absence of natural light
- Battery pack for long autonomy (> 12 months, depending on the computational load)
- Easy re-charge, easy/fast image download and management
- Multiple mechanical configurations, deployable up to 1000 m depth
- Ethernet cable for PC data communication in shallow water deployments (1-3 m) or for connection to vehicles or buoys
- Internal high speed digital lines (i2C) for expansions electronics and communication devices.

PATENT

Made by Oengineering in accordance to the European patent EP2863257 by the National Research Council (Italy) and OnAir S.R.L. (Italy)

MONITOR

Biodiversity
Mucilage
Commercial fish species
Invasive marine species
Jellyfish invasion early-warning
Underwater geological structures
Marine protected areas
Pipeline integrity
Wrecks detection.

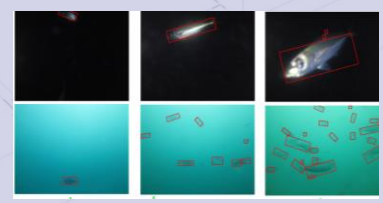


CNR ISMAR ISTITUTO DI SCIENZE MARINE

OENGINEERING

Multiple Optical Configuration
C or CS mount compatible

Carrier Board and NX ITX computing board with STM32 microcontroller



Some example pictures, courtesy of CNR-ISMAR

Oengineering S.R.L.
(legal) Viale Quintino Sella 5/B, 36100, Vicenza, Italy
(operations) Strada Casale, 175, 36100, Vicenza, Italy
(Liguria op.) Via Enrico Albareto, 21, 16153, Genova, Italy
+39 0444 1270111
info@oengineering.eu

www.oengineering.eu