

Deep, Dive Long Range Submersible



AUTOSUB6000'S NEW DUAL CAMERA AND FLASH SYSTEM

The NOC designed camera and flash system was created to allow Autosub6000 to take high resolutions photographs of the sea floor to provide a survey of life in the deep ocean. A typical mission will involve the Autosub6000 AUV flying 3 m above the sea bed in 4000+ m water depths taking photos with the forward and downward facing cameras. The system is designed to take images at 1 Hz for around 16 hours, producing roughly 115000 high resolution images. Due to their size the images they will be stored on a 1 Terabyte hard drive which will be removed and replaced after each mission. The images will then be analysed to assess the types, variety and density of animals living close to the sea bed.

Pressure rated to 6000 m
Dual high resolution gigabit Ethernet (5 MP) low light colour cameras
Dual 10 joule flash units operating at 1Hz
Control and image logging provided by Pico ITX board with 1 Terabyte removable hard drive



Company National Oceanography Centre

The National Oceanography Centre (NOC) is a marine science research and technology institution, which studies the world's oceans from the Caribbean through to the Arctic Ocean.

Product

Deep, long range, submarines

Application

Compact camera controllers to photograph the life on the seabed.

Background

NOC have built a range of autonomous underwater vehicles that are unmanned without a tether, their long range submarines use ARM processors and boards which consume less than 2W. Their submarines are used to photograph marine specimens, controlled with LP-170 boards. When discussing new technology with NOC, they were keen to keep the same system disk image and wanted to stay with it for future builds. Initially they wanted to build another two camera systems. Due to the work **BVM** had done within the marine industry previously, they looked to **BVM** to acquire the embedded LP-170 boards they needed.



Challenges

The submarines have to be submersed to 6000 meters deep and work reliably, for up to six months.

Solution

BVM presented NOC with the LP-170 boards.

Outcomes

NOC inferred that there are other areas of the centre that will also be using embedded technology in the future, with regards to monitoring equipment at the bottom of vessels and **BVM** may be a supplier to count on for an embedded solution. **BVM** work well to provide embedded and technology solutions within the marine industry.

We like to make life easier