



CABLED OCEAN OBSERVATORY

Coastal environments are under intense pressure from the increasing effects of population, such as direct pollution and the addition of high levels of nutrients. Yet in some parts of the world, the oceans are being called upon to provide a larger percentage of our food supply, through aquaculture and fisheries. In the developed world, coastal areas are widely used for commerce and recreation; national security interests play a significant role as well. The need for a deeper understanding of coastal waters has therefore never been greater. This need has shifted the role of oceanographic monitoring systems from a pure research role to an operational role, with responsibilities to deliver high-value information products, not just data. The sensor systems required to provide information to system users have also shifted from simple, more traditional observations of meteorological and physical oceanographic parameters to complex acoustical, optical, chemical and biological sensors. This is driven by the user need for understanding how anthropogenic changes are altering the ecosystems, and what the effects of these alterations are in the long term.

Traditional buoyed systems that can be placed in remote locations are limited by available power and telemetry systems placing restrictions on the ability to provide the necessary information at the temporal and spatial scales required for some applications. This has given rise to an ever-increasing demand for cabled observing systems.

Satlantic cables observatories offer a hierarchical hardware infrastructure combination of the Node Control Module (NCM) that acts as an underwater network hub, and the Serial Instrument Interface Module (SIIM) that acts as an Ethernet port for each sensor, this creating an underwater sensor Internet. These systems provide thousands of watts of usable power and gigabit Ethernet solutions. Combined with our DACNet Ocean Observatory Operating System, this solution allows sophisticated levels of monitoring and control of the network infrastructure in manual or fully automated modes. Operators can monitor the system from secure Network Operation Centers (NOCs) from virtually any computer on the Internet through our secure web browser interface. The system allows data archiving and telemetry streaming functions directly to users such that the complex infrastructure is transparent to the system user.

Powerful solutions, available now. Contact Satlantic with your ocean monitoring challenges and see what our solutions can do for you.

