

**innovators**  
**engineers**  
**technologists**

## Subsea Technology and Engineering

Martech are part of the CodaOctopus Group of Companies and specialise in the design, development and manufacture of custom technology for demanding applications in harsh environments.

With over 20 years experience in the subsea and defence industries, Martech's skills and expertise encompass bespoke electronic and mechanical systems, sonar, signal conditioning, control & instrumentation, special test solutions, and subsea housings.

Partnered with CodaOctopus Products, leading developers and suppliers of technology to the marine geophysical, subsea construction and maritime security industries, Martech offer enhanced design and manufacturing capabilities for application specific integration and installation, or custom technology developments.

### Capabilities

- Electronic systems design
- Mechanical design & 3D CAD modelling
- Software, embedded firmware and FPGA
- NI Lab-View and bespoke solutions
- Electronic & mechanical system assembly
- Cable assemblies & wiring looms
- ISO 9001 accredited

### Applications

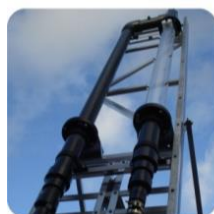
- System & technology integration
- Subsea and harsh environment
- Control and instrumentation
- Sonar and signal processing
- Custom solution development

**Defence Research • Naval Systems • Aerospace • Sonar & Acoustics • Military Vehicles**



## Project Examples

<b>Acoustic Noise Monitor</b>	Developed for a leading wave power technology company, the acoustic monitor enables analysis of acoustic noise created underwater by their generator as it moves with the waves. Drawing on many years of experience developing acoustic systems for defence and commercial applications, underwater noise measurements are essential to determine the impact of man-made system on the marine environment. Other applications could include noise monitoring of offshore structures as indicators of health.
<b>Dive Support Battery Pack &amp; Monitor</b>	Part of an emergency life support system, the battery pack uses state of the art battery technology with high current output, long shelf life and almost flat voltage drop off to give outstanding performance. Housed in a deep rated, Lloyds approved pressure chamber, specially manufactured to our customer's requirements the packs include a specially developed board that constantly monitors the current, voltage and temperature and estimates the remaining capacity of the batteries.
<b>Well-Flow Simulator</b>	Designed for a major subsea technology company the Well-Flow Simulator rig allows instruments and technology to be introduced in to a flowing pipe environment for research and development as well as technology and product assessment purposes.
<b>Sonar Interface</b>	Originally developed for CodaOctopus Products, the 160 sonar interface allows a widely used commercial sidescan sonar to be interfaced directly to CodaOctopus Products' market leading acquisition package, and provides power and signal conditioning for the sonar tow fish. Interface options for almost any existing/legacy sonar can be developed.
<b>Subsea Communications System</b>	Developed for a unique application in deep-water well management, the subsea communications system employs novel patented techniques, and achieves very high data rates through water. Designed to work with existing technologies, the communication system creates a transparent point-to-point connection or subsea network over Ethernet.
<b>AUV Sonar Hardware</b>	Working closely with our customer, an expert in the field of interferometric and parametric sonar processing, Martech developed custom hardware for an autonomous underwater vehicle (AUV) subsea survey application. Incorporating high speed FPGA processing and on board data storage at low power, the hardware developed is highly reconfigurable for a wide range of potential sonar applications, both for AUV and conventional operations.



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