

# Product Guide

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## Locations

- | Aberdeen, Scotland
- | Edinburgh, Scotland
- | Ulverston, England
- | Global Distribution Network

## Who we are.

Tritech International Limited [Tritech] is a high-technology business dedicated to providing the most reliable imaging and ancillary equipment for use in underwater applications. We have three UK locations comprised of a sales and support office in Aberdeen, design office in Edinburgh and large manufacturing facility in Ulverston in England's Lake District. As well as a sales office in the USA, we have a global network of resellers who support and work with customers in their local area.

Sales and rental

24 hour support

Custom engineering



## What we do.

For over 30 years, Tritech have provided the subsea industry with robust, reliable solutions for the harshest environments and most difficult applications. Our product portfolio consists of a suite of Mechanically Scanning and Multibeam Imaging sonar, profiling solutions and oceanographic bathymetric and depth sensing products. Tritech also sells navigation and tracking solutions for small subsea vehicles. All of our products are designed to the highest standards to achieve the quality of product Tritech provides.

Our products go through rigorous production testing, both in-house and on open water, and regularly remain in use for decades, surviving and thriving in the most challenging environments on the planet. We offer customer support 24 hours a day, 365 days a year.

## Why we do it.

Our objective is to support the subsea working environment by making it less hazardous. We aim to help preclude any loss of life or injury during underwater operations and to prevent harm to the environment both subsea and otherwise.

With every product we design, testing exercise we undertake or customer we serve, safety and the mitigation of risk is of the utmost importance. Whether we are helping divers shorten search and recovery missions or enabling ROV operators to perform complex tasks previously completed by humans, our aim is always to provide technology that gives the user peace of mind.

[tritech.co.uk](http://tritech.co.uk)

# Imaging Sonars



Super SeaKing DST



Super SeaPrince



Micron Sonar



SeaKing



Gemini NBI



Gemini 720is



Gemini 1200ik



Micron Gemini

## Mechanical Imaging

Mechanical imaging sonars operate using a single beam or pulse emitted from a transducer. The transducer transmits a pulse, waits for a period of time to receive the data back, then rotates to the next position where the process is repeated. An image is then plotted on the computer screen representing the area surrounding the sonar.

**Super SeaKing DST** - The industry-standard sonar installed on WROV fleets globally and is the ideal sonar for navigation and obstacle avoidance.

**Super SeaPrince** - Specifically designed for deployment in survey, observation and light WROVs and ideal for navigation and obstacle avoidance.

**Micron Sonar** - Our smallest digital CHIRP sonar available and ideal for installation on small ROVs and AUVs and ideal for navigation and obstacle avoidance.

**SeaKing Hammerhead** - A dual frequency, high resolution, 360° mechanical scanning sonar suitable for detailed survey of the seabed.

## Profiling Sonars



Super SeaKing DFP



SeaKing Split Head Sub-Bottom Profiler



Gemini 620pd



Gemini Hub

## Mechanical Profiling

**Super SeaKing DFP** - Using composite transducer technology, this mechanical scanning profiler is used to plot an accurate profile of the seabed. The dual frequency transducer results in substantially increased ranges and image resolution.

**SeaKing Sub-Bottom Profiler**- Provides a clear picture of what lies below the seabed. This compact, low power unit is ideal for installation on small ROVs and AUVs.

**SeaKing Split-Head Sub-Bottom Profiler**- Provides a clear picture of what lies below the seabed with split-head for easy installation.

## Multibeam Profiling

**Gemini 620pd** - A technically advanced multibeam sonar head that produces high-performance bathymetry data.

**Gemini Hub** - Provides accurately timestamped data, in a single or multiple Gemini head configuration, which is then output in a number of industry-standard survey formats.

## Multibeam Imaging

A multibeam sonar does not have any moving parts. It works on the principle of beam-forming multiple acoustic beams across the field-of-view as opposed to the single beam from a scanning sonar, resulting in a real-time sonar image. Applications include obstacle avoidance, target detection and close-range inspection.

**Gemini NBI** - Manufactured from titanium and designed to operate in the harshest of environments such as subsea mining and excavation.

**Gemini 720is** - Ideal for poor visibility environments. Featuring a 720kHz operating frequency and an integrated sound velocity sensor to assist in providing the sharpest image possible, with accurate ranging.

**Gemini 720ik** - A real-time, high-frequency imaging solution developed for shallow water operations.

**Gemini 1200ik** - A dual frequency multibeam imaging sonar for long-range target identification and close-range inspection.

**Micron Gemini** - The world's smallest multibeam imaging sonar. Developed for use on micro ROVs and ideal for difficult to access areas. In the body of a Gemini 720im but with improved imaging, better serial interface and built in PSI sensor.

**RAMS®** - An ATEX-compliant 360° mooring line and riser integrity monitoring system for Floating Production Storage and Offloading Units (FPSOs) and Floating Liquid Natural Gas vessels (FLNGs). Deployed through the FPSO turret, the RAMS® sonar provides simultaneous real-time feedback on the status of all the targets as viewed throughout the full 360° window.

## Side Scan Imaging

Side scan sonars have the capacity to survey large areas of water. Applications include Search and Recovery, port and harbour surveying and wreck hunting.

Our SeaKing AUV/ROV Side Scan can be utilised for deep water survey where a towed system is not suitable. The system utilises DST technology and is extremely compact whilst remaining cost effective.



SeaKing AUV/ROV Sides Scan

## Diver Mounted Display

The DMD system has been designed to provide divers with the ability to navigate and carry out inspections in zero visibility conditions.

The system is available both Tethered (DMD-T) and Untethered (DMD-U) depending on the requirements of the diver. The DMD-T allows the topside dive team to see, in real time, what the diver can see while the DMD-U offers total diver freedom.



Diver Mounted Display

## Bathymetry and Attitude Sensors



Super SeaKing Bathy



PA200 Altimeter



Micron Echosounder

**Super SeaKing Bathy** - Scientific or Survey grade integrated bathymetric sensors, are available in two forms:

**701 Series** - Comprising a depth sensor complete with altimeter.

**704 Series** - Includes the addition of temperature and conductivity sensors to provide a calculated speed of sound for high-accuracy bathymetry measurements.

**PA500 Altimeter** - A 500kHz altimeter which can be used stand-alone or with the 700 Series bathy.

**PA200 Altimeter** - A 200kHz altimeter for increased range.

**Micron Echosounder** - A stand-alone altimeter for accurate height off the seabed and other subsea distance measurements.

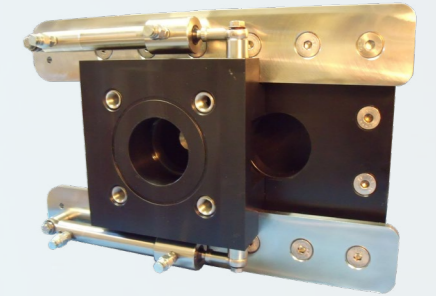
## Mechanical and Hydraulic



Super Zip Jet



Merlin



Anchor Zip 10

**Super Zip Jet** - A reliable, high-performance dredge pump for use on WROVs for excavation and jetting applications. Incorporating several design features which improve its reliability and substantially reduce its maintenance costs.

**Merlin** - Where increased hydraulic capacity is available this unit offers superior performance for excavation and jetting, and can be configured to allow simultaneous jetting and excavation.

**Anchor Zip 10** - A heavy duty suction anchor pump designed for WROVs, able to produce 25 HP of hydraulic power, providing a very quick and cost effective way of installing and removing suction anchors.

## Navigation and Data Transfer Systems



MicronNav 200



Micron Modem



Micron Battery

**MicronNav 200 USBL Tracking System** - Specifically designed for small ROVs and AUVs to complement the Trittech Micron range of products. The USBL transducer (with integral magnetic compass and pitch/roll sensors) communicates with the subsea transponder to provide relative positioning information which is plotted in real-time. The user can monitor the position information on one software package alongside the other Trittech sensor data, such as that from an imaging sonar.

**Micron Modem** - Enables a robust spread spectrum data transmission from an extremely compact unit. Specifically designed for through water data telemetry transfer to/from ROVs and AUVs; it is also the basis of the transponder for the Trittech MicronNav USBL tracking system.

**Micron Battery Modem** - Self powered version of the Micron Modem to enable vehicle recovery when the ROV tether is severed and untethered diver tracking. Battery run time is 700 hours when in receiver mode and 160 hours when transmitting.

## Control Units



Seanet SCU



SeaHub

**Seanet SCU** - A robust 19" rack mount unit with floated shock mount sub-assemblies for maximum reliability. Featuring a high-speed 156kBits/sec communication system to enable operation of a full suite of Trittech sensors over a single twisted pair.

**SeaHub** - A highly versatile unit that allows a customer to interface Trittech or third party survey equipment via a USB connection on their own PC or laptop. Featuring a rugged stainless steel housing, it is available in a desktop or 19" rack mount configuration.

## Video Imaging



Super SeaSpy

**Super SeaSpy Camera** - A high-resolution, full colour camera with integral low-voltage lighting via a ring of white LEDs for uniform illumination.