

UnderCurrents

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WAM-V Unmanned Surface Vehicle Heads Downunder

Australian Maritime College Joins the Maritime RobotX Challenge 2022

The Australian Maritime College has joined the Maritime RobotX Challenge 2022 to be held in Sydney in November 2022 with the acquisition of the WAM-V Unmanned Surface Vehicle.

The WAM-V will also support research, development, and other activities as part of the Defence and Maritime Innovation and Design Precinct (DMIDP) being established at AMC. The DMIDP aims to foster maritime-specific solutions as well as a broad range of science and technology capabilities, drawing academics and members of the maritime industry from across the country to support Defence Science and Technology.

AMC, through its training and consultancy division AMC Search, is at the forefront of training in the use of advanced autonomous marine systems and has been supporting Navy since 2017 in their use and operations.

WAM-V Maritime RobotX Challenge 2022

Wave Glider Trials Underway off Newcastle

Versatile SV3 Wave Glider Brings Processing to the Ocean Edge

The versatile SV3 Wave Glider brings high-powered processing capability to the edge in the ocean by fully integrating the NVIDIA® Jetson Nano™ processor.



NVIDIA® Jetson Nano™ is a low space and weight but powerful computer that enables implementation of multiple neural networks in parallel for applications like image classification, object detection and acoustic processing. This capability is packaged in an easy-to-use platform that requires power as little as 5 Watts. The power of modern AI is now available for at-sea ocean applications.

The SV3 Wave Glider fully integrates the NVIDIA® Jetson Nano™ with power, timing and communications circuits making implementation of advanced processing capability at sea fast and easy.

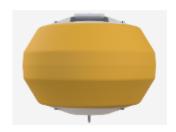
Wave Glider for Powerful Processing at the Ocean Edge

Rethinking Design for Monitoring

Addressing Coastal Monitoring Challenges in Developing Areas

Wave measurements are an indispensable part of any metocean project. The Obscape Wave Buoy is based on recent advances in solar power, sensor and data technology, ensuring a rugged, lightweight, reliable and affordable wave buoy.

Obscape provides a solar powered, lightweight, flexible, and reliable wave measurement buoy enabling bulk wave parameters to reach you in real-time through either GSM or satellite communication. The Wave Buoy uses a combination of motion sensors and an electronic compass to measure the directional wave field with high accuracy. This yields the directional wave spectrum and all parameters that can be derived from it, such as the 1-dimensional energy-density spectrum and a range of bulk wave parameters (significant wave height, peak wave period, peak wave direction, etc.).



Obscape Wave Buoy for Wave Measurement

Hunter Defence Conference 2021

Hunter Defence Industry continues to grow stronger



The Hunter Defence Conference 2021 was held in April in the Hunter Valley and attended by the large primes, NSW SMEs, academia, and the Department of Defence. The conference was completely sold out with industry partners keen to build networks and discuss the future of the industry after the forced cancellation of the conference last year. The themes this year included skilling and workforce readiness, capability development, investment opportunities for SMEs and driving collaboration in the defence industry.

BlueZone Group was proud to be represented by Elizabeth Karpiel (BlueZone CEO) on the panel for Hunter Based SMEs in Defence. The panel focused on the issues, challenges and opportunities faced by SMEs in the defence industry. SMEs are an extremely important part of the industry making up 3,000 of the estimated 3,300 companies in the industry. Effective collaboration with the primes and the Department of Defence allows all parties to use their strengths to deliver the best results.

Defence Industry SMEs at Hunter Defence Conference 2021

RDA Hunter - 2021 Defence Industry Technology Expo STEM Students learn about Defence industry careers

RDA Hunter hosted the 2021 Defence Industry Technology Expo in March 2021. It was an opportunity for Hunter businesses from the Defence industry to show STEM students the different and exciting technologies involved in defence and to talk to them about potential careers in the industry.

BlueZone Group is proud to work with and mentor students to help them maintain their interest and develop their STEM skills. STEM skills are in high demand now and will be well into the future. Liz Karpiel and Andrew Roth represented our company and were impressed with the enthusiasm shown by the students.



Defence Industry SMEs at Hunter Defence Conference 2021

EVENTS

Please join BlueZone Group at these upcoming events as travel restrictions ease around Australia!

We are keen to talk to you about how innovative new technologies offered by BlueZone can solve issues for your challenges in Australia's oceans, coastal seas, and rivers. We are happy to answer your questions and arrange on-site demonstrations and further discussion if required.

Land Forces 2021 - 1 to 3 June - Brisbane

BlueZone will join other Army suppliers at Land Forces 21 in Brisbane. BlueZone provides Remote and Autonomous Systems used by Army for surveillance, survey and Improvised Explosive Device (IED) clearance in the increasingly important and contested amphibious and littoral space.

Army Innovation Day 2017 - Teledyne Oceanscience Robotic Z-Boat for Hydrographic Survey

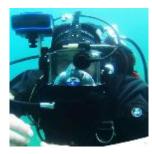
Sea Wasp ROV for Counter Underwater IED Clearance

New Products & Services

Tritech Diver Mounted Display Navigation and inspection in zero visibility conditions

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

Utilising the Gemini range of multibeam imaging sonars allows the user to select the most suitable sonar for the type of operation required. The world's smallest multibeam imaging sonar, the Gemini 720im, provides a basic navigation capability, allowing a diver to locate large structures or objects while working in zero visibility water.



Where a higher degree of resolution is required the diver can opt for the Gemini 720ik or Gemini 1200ik multibeam imaging sonar, both of which provide increased range, resolution and field of view. These high specification multibeam imaging sonars provide a diver with a high degree of confidence while working in zero visibility conditions and allow searches to be undertaken far more efficiently than using conventional search pattern techniques.

The DMD systems have been designed to be used with the Inodive accessory rail system, allowing for the DMD system to be used with an extensive range of dive masks and helmets. All of the Gemini sonars, when supplied with a DMD system, are built-up with an Inodive interface to allow for seamless installation onto the dive mask/helmet.

<u>Diver Mounted Display (DMD) system enables divers to navigate and carry out inspections in zero visibility</u> conditions.

Emergency Relocation Transponder for Diving Bells Transponder and interrogator compatible with Sonardyne systems

Commercial diving companies operating in an area that requires their diving bell to meet offshore standard DNV-OS-E402, must have an emergency locating system that meets section 305 of that standard.

RJE International has developed the ATT-400/AODC transponder - a small battery operated underwater acoustic device, which is used to mark commercial diving bells for emergency relocation to depths of 1000 metres. The interrogation frequency is factory set to 38.5kHz (Ch-A) or 39.5kHz (Ch-B) and, when interrogated, replies to the pre-set emergency frequency of 37.5kHz and meets the DVN-OS-E402 standard.



A diver held interrogator for the transponder, the DTI-300/AODC interrogator, is also available. To ensure a smooth transition, the ATT-400/AODC transponder is compatible with the older Sonardyne systems and can be located with the Ranger2 USLB system and Homer-pro receivers presently in use and fielded.

Emergency Relocation Transponder for Diving Bells

DeepSea Power & Light Multi SeaCam® and LED Multi SeaCam® Last time buy for remaining modules on hand

Further to the announcement in January that the previous models of the Multi SeaCam (1050, 1060, 2060 and 1055, 1065, 2065) were discontinued due to the modules no longer being available, DeepSea Power & Light has extended a final last-time purchase for the few remaining modules left on hand.

A limited number of COLOR (PAL only), EIA, and CCIR modules are available, which will be offered on a firstcome, first-served basis. As of 1 May 2021 all future purchases will have to be for the replacement models. While the outside mechanical envelope remains unchanged, the primary attributes change, which may be critical to some customers' applications. Please contact BlueZone for further information.

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