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A New, High-Performing USV for Ocean Surveying from Nortek China

A new unmanned surface vehicle (USV) designed for the Chinese market offers an open and low-cost platform to measure water current and direction. Nortek China has integrated Doppler instrumentation on the vehicle to help better meet user requirements for ocean surveying.

The new USV has an IPC (Industrial Personal Computer) as the main operation platform and uses Remote Desktop, a remote-control technique, to communicate with all the instruments installed. This means that the vehicle offers an open and low-cost platform for customers who need to carry out several different tasks at the same time. For example, users can perform hydrology and water quality measurement while simultaneously obtaining water samples. Furthermore, the USV can carry other appropriate instruments, for example for geomorphology.

The basic exterior dimensions of the vehicle are about 200 cm length, 70 cm width and 40 cm depth. The USV has two propellers that can produce 80 pounds of thrust force. For navigation control, it can be remotely controlled manually, or be programmed to sail automatically by itself. The design of the vehicle can be adjusted according to different requirements from end users.

"The demand for USVs is growing in China now, and China is a great market in itself. With Nortek having launched the Signature VM system here already, we should grasp this opportunity to open the vessel-mounted current measurement market in China," says Leon Zhang, General Manager of Nortek China.

The new USV is characterized by good sailing performance and excellent stability. A powerful propeller provides propulsion when needed. IPC control and Remote Desktop help simplify the operation of the vehicle. The vehicle also stands out due to its low cost and easy integration of multiple sensors and instruments.

More Info: www.nortekgroup.com

Marine-i Grant Will Accelerate Development of Innovative Artificial Reef System

ARC Marine, who have invented a pioneering system for building artificial reefs, have received a Rapid Innovation Grant from Marine-i to enable them to progress to the next stage of their project.

Part funded by the European Regional Development Fund, Marine-i is designed to help the marine tech sector in Cornwall and the Isles of Scilly grow through harnessing the full potential of research and innovation.

ARC Marine's unique system for building artificial reefs is called Reef Cubes. This patented invention is a robust and simple interlocking modular system that is ideal for restoring complex marine environments. It has a wide range of applications, but one of its most important roles is to help protect vulnerable fish stocks and other marine species whose habitats are at risk.

Tom Birbeck, Director of ARC Marine, explains: "Much of our world's fisheries are now over exploited. Unless the current situation improves, there is a real danger that stocks of all the species that we rely on for food could collapse within 30 years. Our reefs can protect the aquaculture which many of these precious species rely on. These include scallops, crabs, lobsters and shoal fish – all very important commercial species."

Professor Lars Johanning of the University of Exeter, who leads the Marine-i team, says: "ARC Marine have developed an excellent strategy and business plan for their technology. This is a product that has applications around the world and is rich in opportunity. ARC Marine's Rapid Innovation Grant of £2,000 will enable them to purchase the diving equipment they need to carry out extended mooring and installation trials in preparation for a full commercial launch."

Tom Birbeck adds: "With the excellent help and support of the Marine-i team, we have ambitions to become the industry leaders in marine eco-engineering and conservation projects, operating from our base at Penryn in Cornwall. In addition to the grant support, we have received outstanding advice and insights from the Marine-i experts and their associates. For a young company like ours, that is simply invaluable."