

Kongsberg Maritime unveils Munin, a sophisticated new generation AUV

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KONGSBERG

Kongsberg Maritime is launching MUNIN, the next generation Autonomous Underwater Vehicle (AUV) for offshore survey at Offshore Europe 2013. Kongsberg Maritime's Subsea Division has combined its experience in developing and manufacturing the highly reliable HUGIN and REMUS AUVs to bring the compact MUNIN AUV to the market, setting new standards for performance and flexibility in low logistics AUV survey operations.



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The new MUNIN AUV is designed to collect high resolution sonar data geo-referenced by a survey grade positioning system. Capable of providing the same high-level performance and survey accuracy of the established KONGSBERG AUV family, MUNIN is an efficient compact vehicle design, providing for easier launch and recovery and the possibility of using smaller launch vessels.

MUNIN features a modular structure that provides the ability to install extra batteries to extend operational scope for missions lasting up to 24 hours at depths as deep as 1500m. Weighing in at less than 300 kg in air, its 34cm diameter and length between 3 and 4 metres depending on configuration, places MUNIN as one of the lightest, most compact and most capable AUVs for offshore survey available today.

Despite its small size, MUNIN is capable of carrying a complete subsea survey payload, consisting of world leading sensor technology. It features an advanced new rigid design which integrates the navigation systems and acoustic payload sensors in a single mechanical housing, which is factory calibrated and requires no re-alignment after transport or re-mobilisation. The IHO special order (S-44) compliant sensor payload includes a custom version of the EM2040 multibeam echo sounder, 200-400 kHz, 1°x1° beam width, swath 120° in addition to an EdgeTech side scan sonar 230/540 kHz and forward looking sonar with advanced terrain following and collision avoidance. Also included is an NBOS conductivity and temperature (CT)

sensor whilst a sub-bottom profiler and still image cameras can be specified.

Highly user configurable, MUNIN's flexible communications and navigation systems feature an array of some of the most sophisticated technology available to survey operators. Communication is via Kongsberg Maritime's cNODE acoustic command and data link, Wi-Fi and Iridium. The Kongsberg Maritime NavP aided inertial navigation system (AINS) with Honeywell HG9900 inertial measurement unit (IMU) feature within the navigation system alongside cNODE and HiPAP (option), which offer precise, reliable acoustic positioning.

"The offshore survey industry has long sought a highly capable tool that can be operated from smaller vessels," comments Geir Schmidt, Vice President AUV, Kongsberg Maritime. "MUNIN offers this possibility whilst retaining the ability to carry high-grade survey, navigation and positioning systems that ensure the efficient collection of accurate, reliable high resolution survey data."

In Norse mythology, MUNIN (Muninn) and HUGIN (Huginn) are a pair of ravens that fly around the world of Midgard, collecting information for Norse God Odin. Kongsberg Maritime AUVs are designed to provide survey operators with highly accurate data, so alongside the existing HUGIN, MUNIN was the perfect name for this next generation survey vehicle.

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