

In-mission Processor Allows Real-time Processing of HISAS Data



Hydroid, Inc., a subsidiary of Kongsberg Maritime and a leading manufacturer of marine robotic systems, has just announced it has integrated an in-mission processor on a REMUS 600 Unmanned Underwater Vehicle (UUV) with the KONGSBERG High-Resolution Interferometric Synthetic Aperture Sonar (HISAS) 2040 for a customer. By integrating the in-mission processing, the high-resolution images from the HISAS module can be quickly downloaded when the vehicle returns from its mission.

Gap-filled Image

HISAS 2040 provides up to 2cm by 2cm resolution across a 300-metre swath. When combined with the onboard EM2040, it provides a complete, gap-filled image. Synthetic aperture sonar uses algorithms to synthetically lengthen the aperture, providing consistent resolution across the entire swath, both along and across the track, as opposed to traditional real aperture side scan sonars. Because of the high resolution of HISAS, the files are very large and can take several hours to download.

With the in-mission processor, HISAS data is processed and compressed in real-time, along with the navigation data, allowing immediate download of the sonar imagery when the vehicle returns from its mission through a 10 Gb Ethernet switch. This is ideal for time-sensitive missions like mine countermeasures, where faster data access means safer, more efficient operations. Other HISAS applications include hydrographic surveys, pipeline inspection and rapid environmental assessment.

To integrate the in-mission processing onto the vehicle, two powerful processors were added to the module. With this solution, customers can rapidly obtain the quality data they need, increasing their operational flexibility and assisting with improved decision-making.

About Hydroid

Located in the US and a subsidiary of Kongsberg Maritime, Hydroid is the world's most trusted manufacturer of advanced Autonomous Underwater Vehicles (AUVs). Our marine robotics systems provide innovative and reliable full-picture solutions for the marine research, defence, hydrographic and offshore/energy markets.

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