

caris ONBOARD



Built on decades of hydrographic data processing expertise and supported by the highly scalable CSAR framework, CARIS Onboard™ enables users to process data from a range of sensors in near real-time to minimize data conversion and processing times. Designed with autonomous operations in mind, CARIS Onboard can also save valuable time and resources when used on survey vessels and launches.

REAL-TIME DATA PROCESSING

Using CARIS Onboard

CARIS Onboard supports the same range of sonars and acquisition formats as CARIS HIPS™ and SIPS™. Large volumes of data are automatically imported and the trusted HIPS and SIPS algorithms are applied. CARIS Onboard generates a HIPS project and can be easily configured to output other products, such as DEMs and image mosaics. All of which are kept up to date as new data is processed. By the time the survey platform has completed its mission a fully geo-referenced DEM and mosaic, along with a HIPS project, are available for final quality control and use in survey deliverables.

System Overview

The CARIS Onboard software has three main components:

Process Designer provides a graphical interface to design and configure data

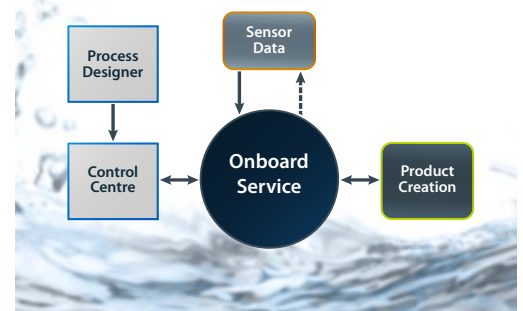
processing workflows. It allows users to add, customize and save a variety of processing tasks. This includes data import, tide and sound velocity corrections, creation of output data products and automated data cleaning (e.g. using CUBE). Standard processing workflow templates are also provided.

Onboard Service is an automated service that monitors for raw data files from an acquisition system and batch processes the acquired survey data. As new data is detected it is automatically processed using the workflows defined through the Process Designer. The output data products (e.g. HIPS project, DEMs and mosaics) are also registered for remote access. Products and quality information generated by the Onboard Service are streamed to the dedicated Control Centre or to desktop applications, such as HIPS and SIPS. This enables the hydrographer to view the geo-referenced survey in near

real-time for quality control and decision support while the survey is underway.

Control Centre provides a single access point for users to configure, manage and monitor the Onboard Service. Status information about the processing is displayed alongside a map window showing survey coverage and data quality. The Control Centre can be used on a vessel or accessed remotely from an office location, via an internet connection.

CARIS Onboard Workflow





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Raw imagery and co-registered bathymetry data from Kraken AquaPix® InSAS

CARIS ONBOARD

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Deployment Options

CARIS Onboard can be installed on a desktop computer, laptop or directly on to the computer payload of your autonomous vehicle. It is certified on Windows 7 and will soon be available for Linux operating systems. Hardware versions are also available as a rack mount for dedicated vessel operations or as a water tight canister for subsea vehicle use. The computer specifications for the hardware versions of CARIS Onboard have been designed with tomorrow's survey sensors in mind to provide the processing speed and disk space needed. OEM agreements can be arranged for sensor or vehicle manufacturers on request.

System Benefits

CARIS Onboard automates many of the standard processing steps required in a modern sonar survey that not only reduce subjectivity, but allow human resources to work on specialized tasks. It is especially optimal for autonomous operations where traditionally data can only be processed after vehicle recovery, which causes a data processing bottleneck. When used with survey launches or unmanned surface vehicles it becomes a force multiplier allowing surveys to be conducted more efficiently. With the ever expanding volume of data being collected at higher resolutions CARIS Onboard can significantly reduce your Ping-to-Chart™ timeline.

Ping-to-Chart

CARIS Onboard fits seamlessly into the existing Ping-to-Chart suite of software, providing near real-time seafloor mapping and dramatically reducing the overall project time. Integrating with both autonomous and traditional survey platforms, CARIS Onboard provides an operational advantage and allows your highly skilled workforce to concentrate on getting the best results.



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