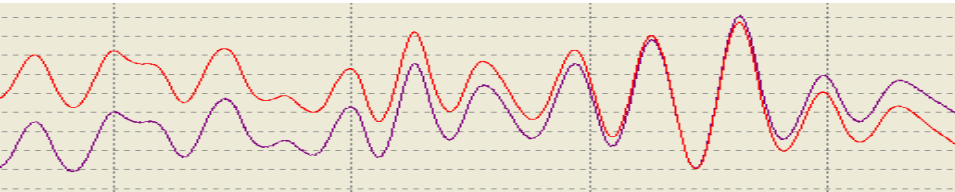


iHeave™

intelligent heave processing



Octopus iHeave™ is an intelligent solution for long period ocean swell compensation and is fully integrated with the Octopus F180series™ Precision Attitude and Positioning System.

In many parts of the world, hydrographic survey is severely affected by low frequency ocean swells often up to 70 seconds long, resulting in distortions in bathymetric measurements. Conventional techniques for real-time heave measurement can only offer limited accuracy and are insensitive to ocean swells exceeding 10 to 20 seconds. Analysis of raw motion data with Octopus iHeave allows a more accurate determination of the real heave motion experienced by a vessel, and enables the output of precise heave values for all ocean swells.

Operating in near real-time, iHeave is able to process F180 data online resulting in a processed heave file being available for inclusion in multibeam bathymetric data processing, only a few minutes after the end of the survey line. In conventional heave scenarios where long period heave is not significant problem, iHeave is able to generate higher accuracy heave data than achievable in real-time.

As a fully integrated component within the standard F180 configuration and display software, iHeave is available to ALL Octopus F180 users, making complex heave problems a thing of the past.



FEATURES

- Near REAL-TIME heave data output
- Up to 70s swell period
- Reliable heave measurement in ALL swell conditions
- Direct recording of processed heave data in standard formats
- Real time vs processed heave quality monitor with alarms
- Simultaneous multiple frequency heave detection

BENEFITS

- Accurate surveys in ALL heave conditions
- No down-time due to heave problems
- Saves time by eliminating the need for long run-in and settling periods

F180
series
Precision Attitude & Positioning System

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Octopus iHeave™ Technical Specification

Data Formats

Input	F180 MCOM on UDP/Ethernet direct from F180 (real-time, high data rate, full information message)
Output	Modified MCOM format with time-tagged processed heave recorded on-line to hard disk ASCII (processed heave values with time-tags) recorded direct to hard disk <i>NB all iHeave data is output to file with a maximum latency of 350 seconds</i>

Processing

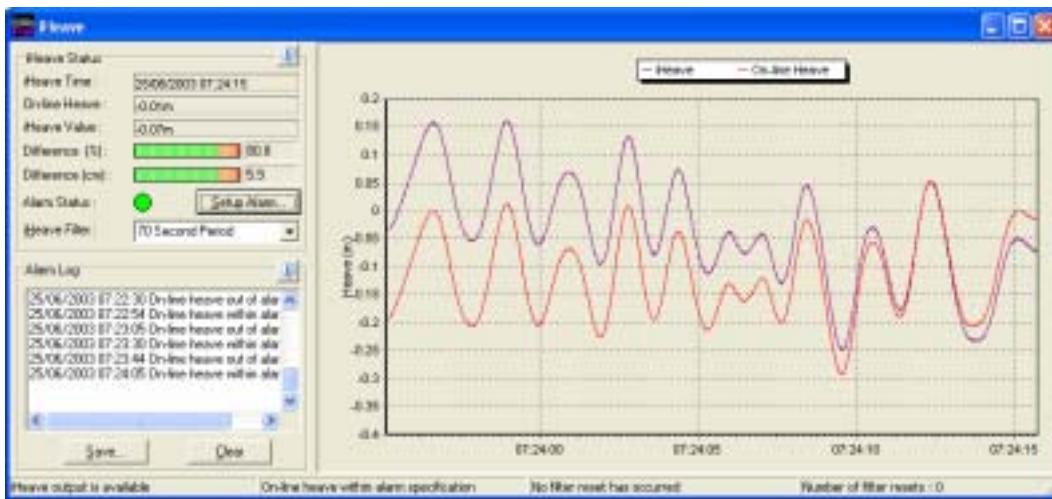
Accuracy	5% of heave displacement or 5cm whichever is greater
Online filter	70 second (0.014Hz) heave filter operating online in near real-time (350 second output latency) <i>NB. 70 second filter is always used for online/near real time processing to ensure that all available data is used and subtle long period swells are not overlooked.</i>
Offline filter	Selectable 30 or 70 second heave filter. Pre recorded F180 MCOM data may be reprocessed offline for improved heave characteristics <i>NB 30s offline filter operates with 150s latency.</i>

User Interface

General	Fully integrated with standard F180 configuration and display software for Windows (XP & 2000)
Display	Online graphical display of processed heave versus corresponding real-time heave value Bar-chart indicators of variation expressed as % and cm
Alarms	On screen warnings when real time heave value diverges from processed heave value, with user defined thresholds.

Miscellaneous Tools

Data converters	MCOM to CSV converter (spreadsheet format) supplied as standard
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Above top: typical iHeave display screen
Above left: F180 attitude and positioning system; Above right: standard F180 user interface

F180™, iHeave, the F180series logo, Octopus™, and the Octopus Logo are Trademarks of CodaOctopus

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