



Bathyswath-3 OEM

For small vessels integration

HIGH-DENSITY BATHYMETRY

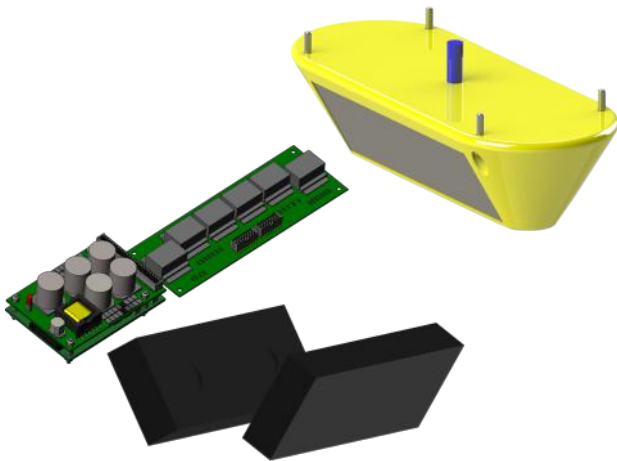


Performance & Quality

Bathyswath-3 OEM gives significant performance & good data quality, the sonar electronics and transducers are provided as parts for integration inside small vessels or vehicles. Bathyswath-3 provides more data under the boat and better data quality at the swath edge than previous Bathyswath-2 version.

Features

- Swath bathymetry (depth measurement) and sidescan (imaging) in one package,
- Suitable for autonomous or human operation,
- Ethernet interface,
- Full suite of data acquisition and processing software,
- Wideband (chirp) sonar technology.
- 3 sonar frequencies simultaneously, in bathymetry and sidescan.



Software, 3D bathymetry & sidescan data

- Fully-functional survey software (for sonar, position, sound velocity and motion data acquisition) and post-processing software (for 3D rendering and digital terrain models) included in package price.
- Bathyswath sonar is also compatible with most usual commercial software packages.
- The main Bathyswath software suite runs on Windows, and has a rich set of interfaces for operation on remote vehicles.
- For operation on small, low-powered vehicles, we provide a Linux application, which provides a cut-down set of functions for real-time operation.

Advantages

The main advantages of Bathyswath-3 OEM over other swath bathymetry sonar systems for small autonomous vehicles are:

- Very small electronics package,
- Small and light sonar transducers,
- Wide swaths when close to the bottom (shallow water or low flying height),
- Data acquisition software for Linux or Windows, full survey control and data processing software for Windows,
- Low cost & low-power consumption.



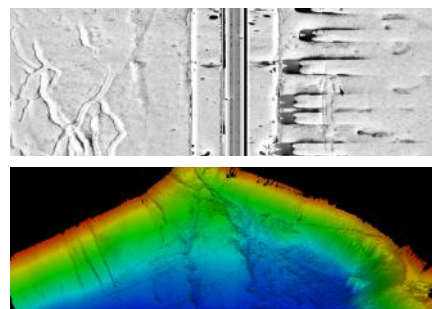
Transducer, 2 possibilities:

- Compact 2-in-1 pod (port and starboard transducers in a single mold)
400, 800 and 1600 kHz acoustic staves in each transducer.
1600 kHz dedicated to high resolution sidescan data.
- 2 separate transducers (port and starboard)
250, 500 and 1000 kHz acoustic staves in each transducer.
1000 kHz dedicated to high resolution sidescan data.

Bathyswath-3 Transducer Electronics Module (TEM)

Optional components

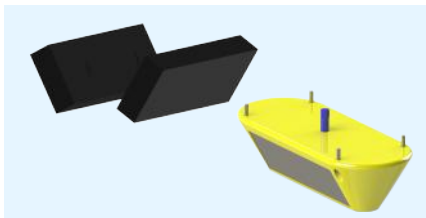
- An interface board, simplifying connection to the TEM,
- Cable sets, with standard computer & power connectors,
- Transducer extension cables,
- Transducer mounting hardware.



INTERFACING

It is simple to interface Bathyswath-3 OEM to your system hardware and software:

- Mechanical CAD models & installation advice available on request.
- Off-the-shelf & custom-built mechanical mounting hardware available.
- Full documentation of electrical & logical interfaces provided.
- Works with most major INS, GNSS and Sound Velocity Sensor hardware.
- Interfaces with most major bathymetric survey software package, or the Bathyswath software can be used stand-alone.



TECHNICAL SPECIFICATIONS

Sonar specifications

Simultaneous frequencies (kHz)	250	500	1000
Operational slant range (m)	200	100	50
Maximum slant range (m)*	300	150	75
Minimum depth (m)	0.2		
Beam width, azimuth (2-way)	0.5°	0.25°	0.25°
Transducer dimensions (mm)	TBD	TBD	TBD
Transducer weight, air/water (kg)	TBD	TBD	TBD
Maximum transducer cable length (m)	30		
Transducer electronics module	115 x 85 x 36 (mm), 210g		
Power requirement	20W (max) @ 9 -14 VDC		
Other interfaces	PPS timing in, transmit sync in & out		
Transducer pressure rating	2000m standard, 4000m & 6000m on request		
Simultaneous frequencies (kHz)	400	800	1600
Pod transducer dimensions (mm)	329 x 128 x 115		
Pod transducer weight (kg)	2		

* Refer to our Bathyswath technical information document (pdf) available on www.iter-systems.com.

Other package options

Bathyswath-3 is available in two other package options:

- Bathyswath-3 ALPHA: an integrated module for mounting on a pole over the side of a boat, including the following optional ancillary devices: motion sensor, dual-antenna GNSS receiver, sound velocity sensor.

- Bathyswath-3 SIGMA: the sonar electronics is integrated with a single compact 2-in-1 pod, for use on very small vehicles and vessels, including man-portable Unmanned Surface Vehicles (USVs).

"The quality of the data collected during the trial was high both in terms of coverage and resolution."

- Neil Crossouard - HR Wallingford survey specialist

FROM A TO Z



Sonar systems engineering.



Training on client's site or on lake in front of our premises.



Software development for our own products or for new interfaces with customers systems.



Remote technical support.

A WIDE RANGE OF APPLICATIONS



Marine services



Research



Environment



Natural resources



Archeology



Military REA

Bathyswath a brand of the company

ITER Systems

ITER Systems is one of the world's most experienced team of developers of interferometric sonars. Its products are direct descendants of the world's first commercially available interferometric swath sonar system, developed into SWATHplus, which renamed Bathyswath in 2013. Bathyswath-2 was released in 2015, and Bathyswath-3 in 2020 gives yet another significant advance in performance and usability.

ITER Systems provides innovation, quality product at an affordable price, for the international market with high quality technical support. A team of specialized engineers are located in France and in England to answer all your needs.

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