



# Bathyswath-2 UW

An underwater application

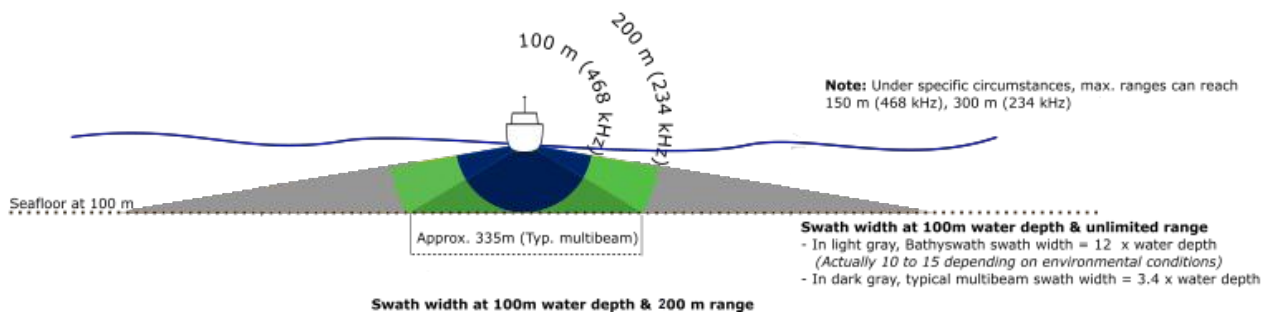
# HIGH-DENSITY BATHYMETRY

## Performance & Quality

Bathyswath-2 Underwater is the standard version of our bathymetric systems. This sonar system gives improved performance in a small, low-power package and an Ethernet interface. Bathyswath uses wide swath widths; this increases survey speeds significantly, especially in shallow water.

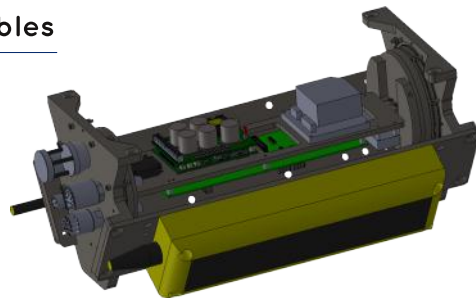
## Productivity

Bathyswath uses wide swath widths; this increases survey speeds significantly, especially in shallow water. It has two frequencies: 234 or 468 kHz with respectively 200 and 100m maximum ranges. The US Geological Survey (USGS) said: "Operating swath of the bathymetric system ranged from 15 to 20 times water depth in in depths less than 15m".



## Spider & umbilical cables

Power & data.



## 1 or 2 transducers

- 234 or 468 kHz.

## Housing (Subsea Unit)

- 100 or 2000 m depth rated.

## Optional devices

- MiniSVS Sound Velocity Sensor (SVS),
- Optional motion sensor : Ellipse IMU.

## SWATH software included

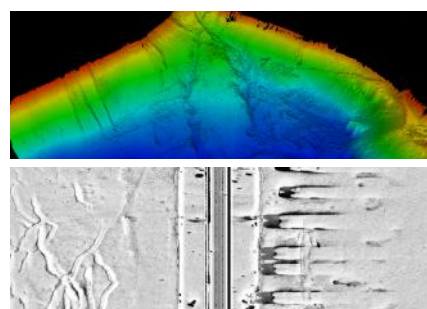
Data acquisition, processing & 3D.

## Mounts (optional)

- Universal Mounting Kit to allow deployment on vessel of opportunity,
- Side Mounting Kit for installation on RIBs.

## Software, 3D bathymetry & sidescan data

- Included in package price.
- Fully-functional survey software (for sonar, position, sound velocity and motion data acquisition) and post-processing software (for 3D rendering and digital terrain models).
- Bathyswath sonar is also compatible with most usual commercial software packages.



# SUBSEA UNIT & ANCILLARY DEVICES

## Subsea Unit (SU)

For use at the end of a pole or on underwater vehicles. The bottle contains Transducer Electronics Module, power supply, cooling fan & Ethernet switch, & optionally Ellipse IMU & miniSVS Sound Velocity Sensor. The transducers are fixed to each side.

## Ancillary devices (optional)

Bathyswath is compatible with most GNSS, INS & SVS devices; the following are provided in our integrated Bathyswath-2 UW package:

- Ellipse IMU, MEMS technology, ITAR free; Pitch & roll accuracy  $<0.1^\circ$ ,
- MiniSVS Sound Velocity Sensor, Resolution 0.001 m/s.



# TECHNICAL SPECIFICATIONS

## Sonar specifications

Available frequencies (kHz)*	234	468
Operational slant range (m)	200	100
Maximum slant range (m)**	300	150
Minimum depth (m)	0.2	0.1
Measurement resolution limit (mm)	6	3
Resolution detection limit (mm)	3	1.5
Across track resolution (cm)	2	1
Azimuth beam width (2-way)	0.55°	0.55°
Transmit pulse length	8.5 to 4300 $\mu$ s	4.3 to 2100 $\mu$ s
Maximum cable length (m)	50	
Transducer dimensions (mm)	100 x 340 x 55	60 x 230 x 40
Transducer weight, air/water (kg)	5/0.8	1/0.1
Subsea Unit dimensions with 234 kHz transducers	192 x 290 x 660 mm, 26.6 kg	
Subsea Unit dimensions without transducers	192 x 210 x 510 mm, 21.8 kg	

\* 1 transducer = 1 frequency

\*\* Refer to our Bathyswath technical information document (pdf) available on [www.iter-systems.com](http://www.iter-systems.com).

*"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 2019 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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