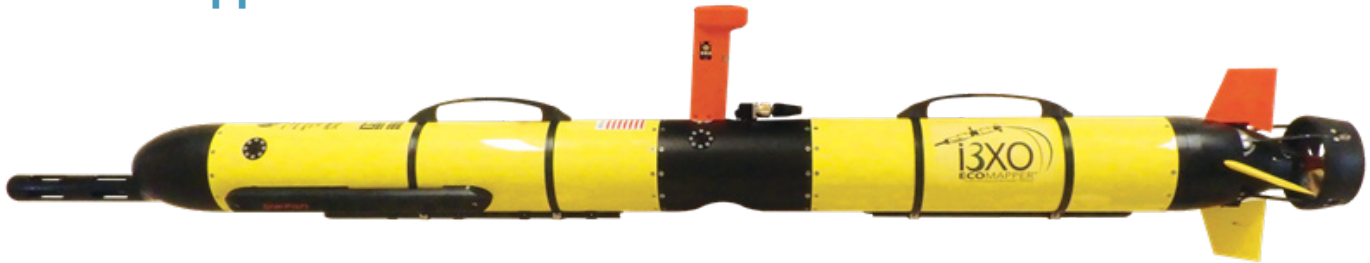# i3XO EcoMapper™ FAQ

1. What is the i3XO EcoMapper AUV?

The i3XO EcoMapper is a multi-parameter one-man portable survey AUV (Autonomous Underwater Vehicle), specifically designed to allow surveyors to access co-located data in remote or hard to reach areas that were previously difficult or impossible to survey.   The i3XO EcoMapper can survey at depths up to 100m, which allows users to get complete coverage of the body of water they are surveying.

2. What data can the i3XO EcoMapper obtain?

Depending on sensor payload, the i3XO EcoMapper will simultaneously collect water quality, bathymetry (single and multi-beam), side scan sonar, current speed/direction at different layers, magnetometry, and photogrammetry that can be used in a wide range of applications

3. Who can benefit from the i3XO EcoMapper? Is this a vehicle that can be used in more than one industry?

The i3XO EcoMapper can be used for Water Quality studies, pollutant identification and mapping, habitat mapping, volumetric studies, general bathymetry, infrastructure inspection, scour inspection, disaster response, forensics/search and recovery, port inspections, and much more!

4. Is there anywhere that it cannot be used?

a. Typically, it should not be used in currents exceeding 2 knots and depths shallower than 1m or deeper than 100m.

b. Since the vehicle can dive below the water surface, surveys can still be completed regardless of the surface conditions, as long as it is safe for the user.

5. How many people does it take to deploy the i3XO EcoMapper? And how long will it continuously operate?

a. Typically, only one user is required for deployment, operation, and recovery of the i3XO EcoMapper.

b. With a fully charged battery, depending on sensor payload, the vehicle will operate from 6-10 hours at a standard 2.5 knot survey speed

6. What sensors can be integrated into this system?

a. The base vehicle comes standard with an EXO1 OEM for water quality (4 sensor ports; C/T required in one), RDI Explore DVL for current measurements, single beam bathymetry and improved navigation, a forward looking sonar for object avoidance, Wifi and WASS corrected GPS.

b. Options include the Edgetech 2205B for bathymetry and dual frequency Side Scan Sonar, Blueprint acoustic modem for underwater communication, iridium modem for surface communication, Magnetometer, Starfish Side Scan Sonar, and much more!

7. Can third party sensors be integrated into vehicle?

a. Yes and no. The base vehicle does not come standard with the expandable payload option, which includes a backseat computer for 3rd party sensor integration. However, we have 2 vehicle options that will include the expandable payload option for 3rd party sensor integration.

b. The two versions are the i3XO EP10 and i3XO EP16. The two options offer varying sizes to meet your payload requirements. For more information on these models, please contact your local sales representative.

8. What software is required to operate the vehicle?

a. The i3XO EcoMapper comes standard with VectorMaps mission planning/post processing software, SonarMoasic for side scan processing, and ADCP converter for current/speed processing from the DVL.

b. 3rd party software such as HYPACK can also be used for further processing of multi-beam, side scan, and water quality data.

9. What is the difference between the i3XO EcoMapper and other AUVs on the market?

a. Supplied point and click mission planning software; Users can be trained to operate this vehicle proficiently within 3 days.

b. Complete package; there are very few, if any vehicles out there that have a fully integrated water quality package that will log directly to the log file for geo-referenced data at 1hz intervals

c. Safety features; forward object avoidance, leak sensors, iridium modem, acoustic modem, location pinger, safety setting adjustment that will activate the safety return path upon failure of any certain number of criteria like lack of forward progress, leak detected, etc.

d. Watchdog backup for iridium modem that will allow transmissions for up to 24 hours after main battery has died.

e. Small package for the amount of data/equipment provided.

f. Can be fully operated by a single individual.

10. How much does the i3XO EcoMapper cost?

Price will vary depending on the sensor payload. Please contact your local sales representative for a quote today!

11. Can I rent an i3XO EcoMapper?

Currently rental is not an option, however, YSI's Integrated Systems & Services division has the ability to offer surveys that utilize the i3XO EcoMapper. YSI can scale these survey offerings to meet most client's needs. For more information, contact your local sales representative.

12. What is the standard lead time for the i3XO EcoMapper

Typical lead-time will be 10-12 weeks