



International
Submarine
Engineering Ltd.
A GeoSpectrum Technologies Inc. Company

EXPLORER AUV

The ISE **EXPLORER** Autonomous Underwater Vehicle (AUV) collects IHO compliant data at a rate of 750 to 1100 km per week of ship time with all sensors operating. The modular design of the **EXPLORER** enables it to carry multiple payloads in its spacious, swappable, and customizable payload section.

APPLICATIONS: Mine Countermeasure, Route Survey, Hydrographic Survey, Pipeline Inspection, Ocean Science Research, Environmental Monitoring

- PROVEN MISSION ACCURACY
- UNPARALLELED SURVEY CAPABILITIES
- IHO COMPLIANT DATA
- MODULAR PAYLOAD SECTION
- AUTONOMOUS LAUNCH & RECOVERY
- UNDERWATER DOCKING
- FAST CHARGE <3HR

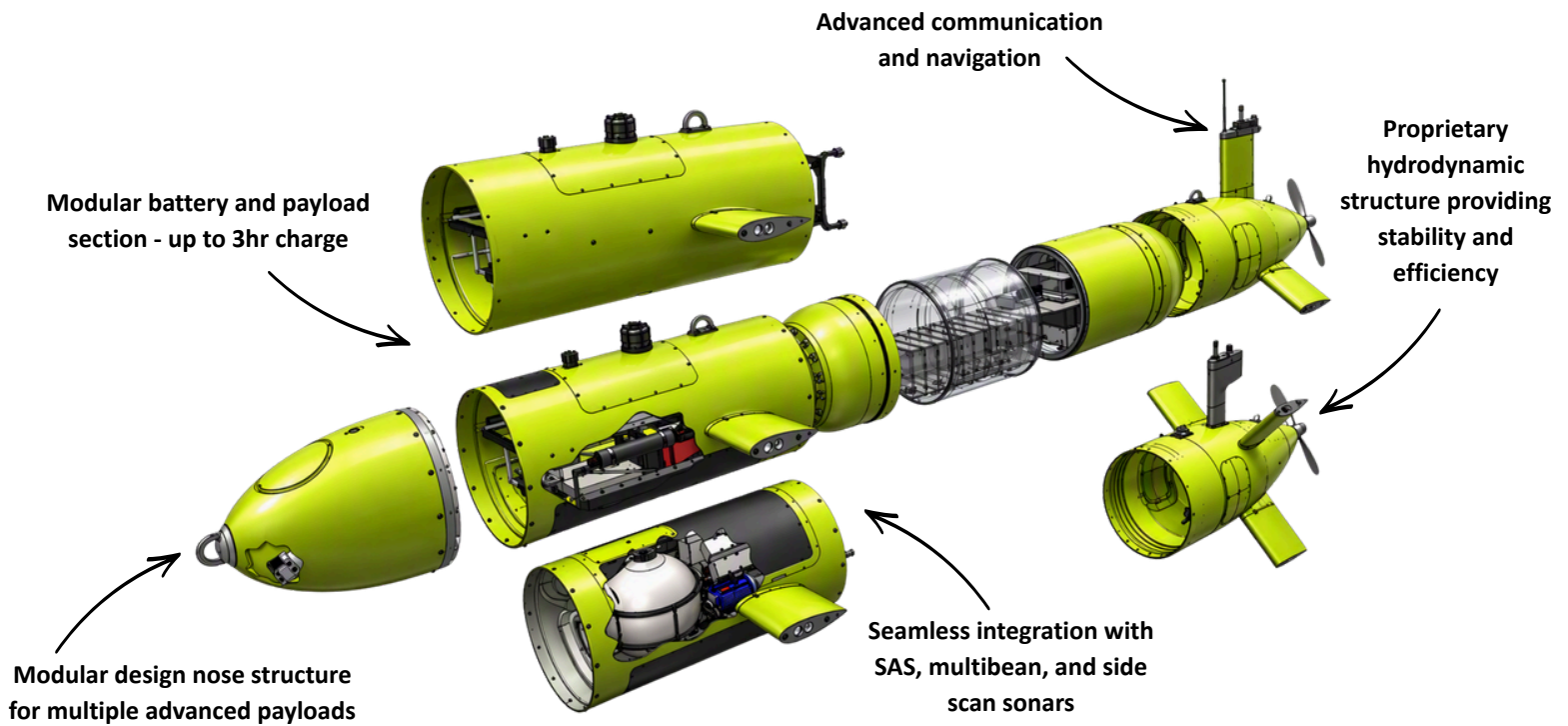


FEATURES & CAPABILITIES

- Industry leading autonomy and fault management
- **5 m turn radius & roll control:** no time wasted with huge turning allowances or waiting for roll oscillation to subside
- **60° dive/ascent:** increases survey time, minimizes INS drift
- **In mission data sampling** and QC by operator
- **Automatic USBL/LBL** position correction
- **Upgrade range:** Battery modules can be added to increase available power
- **Six LARS Options:** Crane, Ramp, Docking Head, A-Frame, Trailer, Fully Containerized operations
- **Belly pack:** for piloting close to the support vessel
- **Under ice operation:** Variable ballast, >50 km homing, gate-way buoy compatible, in-water charging & data

PAYLOADS

- Multibeam Echosounder (MBES)
- Sidescan Sonar (SSS)
- Sub-Bottom Profiler (SBP)
- Synthetic Aperture Sonar (SAS)
- Laser Scanner
- HD Still and Video Camera
- Magnetometer
- CTD, pH, pCO₂, CH₄, DO, Turbidity,
- Nitrate, and other chemical sensors



SPECIFICATIONS

AUV PERFORMANCE

- Depth Ratings: 1000m, 3000 m, 6000 m*
- Range between charge: 160—600 km**
- Endurance: 24—115 h**
- Survey Speed: 0.75—2.5 m/s
- Maximum Ascent/Decent Angle: 60°
- Turning Radius: 5 m
- Terrain Following: 1.5 m+ altitude

WEIGHT & DIMENSIONS

- Length: 4.5—7.5 m**
- Diameter: 0.69 m, 0.74 m
- Weight: 620—1700 kg***

ENERGY

- Energy Capacity: 24—139 kWh**
- Charge Time: <3 h
- Battery: Lithium Ion, shippable by air, sea, or land

*Others available upon request

** Depending on quantity of battery banks and survey payloads operating

*** Based on selected options

STANDARD NAVIGATION & COMMUNICATION EQUIPMENT

- Inertial Navigation System
- Doppler Velocity Logger
- Depth Sensor
- Obstacle Avoidance Sonar
- GPS
- Acoustic Communication
- Surface Communication
- Acoustic Positioning
- Emergency Equipment

SOFTWARE & COMPUTERS

- ISE Automated Control Engine (ACE) modular, upgradable, field proven, multiplatform software
- Onboard Data Storage and Processing Computer
- Backseat Driver: Allows customer payload integration, software development, and data processing