Product factsheet

CyanoShark by RanMarine

Hardware product or technological device

Description

Next-generation aquatic solution for harmful algal bloom management

The CyanoShark represents a breakthrough in autonomous water treatment technology, combining RanMarine's proven WasteShark platform with Eget Liber's innovative Staged Flow Treatment System (SFTS). This sophisticated autonomous surface vessel (ASV) is specifically engineered to combat harmful blue-green algae blooms (cyanobacteria) using entirely chemical-free methods.

- Precision navigation
- Real-time water quality monitoring
- Effective algae treatment without chemicals

- Reduced manual intervention requirements

  The vessel's advanced sensor array, including LiDAR, GPS, and Inertial Measurement Unit (IMU), enables independent navigation while following pre-programmed mission routes or responding to real-time operator control via remote interface. The integrated SFTS features strategically designed multi-angled baffles at the front section that efficiently guide buoyant cyanobacteria from the water's surface layer into the onboard reactor unit. Once captured, the system employs multi-modal, chemical-free treatment methods to safely disrupt and neutralize harmful algae while minimizing impact on other aquatic life.

  Real-time water quality monitoring ensures optimal treatment effectiveness, while 4G connectivity provides continuous data transmission and operational oversight. This targeted approach focuses treatment efforts where cyanobacteria naturally accumulate, maximizing efficiency while reducing the need for manual intervention and providing a scalable solution for consistent harmful algal bloom management.

Target audience

Research, water control bodies, water quality monitoring and analysis, harmful algal bloom management, environmental impact assessments, and data-driven consulting services.

URL

https://www.ranmarine.io/products/cyanoshark/

Technology applied by the product

- **Water Quality and Standards**

Related tags

pollution | cyanobacteria | blue-green algae