

Scientific Systems Introduces VENOM Autonomous Small USV



From Scientific Systems

VENOM Is Cost-Effective, Quickly Built With Rapidly Scalable Manufacturing, And Designed To Meet The U.S. Navy's Need For sUSV Interceptors

BURLINGTON, Mass., July 15, 2025 – Scientific Systems, an industry leader in developing AI-powered autonomy for defense

applications announced today the debut of its Vehicle for Expeditionary Naval Over-the-Horizon Missions (VENOM) small Unmanned Surface Vehicle (sUSV.) Designed to address the Navy's operational need for sUSV interceptors, VENOM has effectively demonstrated its seakeeping performance and autonomy behaviors during sea trials and is available now for procurement by the Department of Defense and other government agencies.

VENOM is a multi-mission, 9-meter-long unmanned surface vehicle, featuring a rugged High-Density Polyethylene (HDPE) hull and a 300HP outboard diesel engine. The sUSV delivers over 35 knots of sprint speed, a greater than 500-nautical-mile range at 24 knots in moderate sea state, and a loiter capability of 130 hours, surpassing the expected requirements of the Navy. VENOM has demonstrated the ability to autonomously transit through contested water space, avoiding static and moving obstacles, loiter in an assigned operating area while monitoring for maritime surface threats, and then sprinting to interdict a noncooperative, maneuvering vessel, making it ideal for missions including force protection (kinetic and non-kinetic), persistent ISR, contested logistics, and maritime patrols & security.

As an innovative, non-traditional autonomy software company, Scientific Systems joined forces with best-in-class teammates Tideman Marine and Sea Machines to deliver this software-centric unmanned surface vehicle. With manufacturing readiness secured, the team is prepared to rapidly scale delivery of this affordable, unmanned surface vehicle to meet anticipated Department of Defense needs.

"Scientific Systems was honored to work with partners to successfully test and qualify our production-ready, low-cost, autonomous VENOM interceptor that can travel hundreds of miles through contested water space," said Scientific Systems Chief Executive Officer Kunal Mehra. "The fact that Scientific Systems is leading a team of partners for this vehicle

underscores the reality that the future of warfare is software driven. We are proud to continue to develop the type of cutting-edge autonomous solutions the U.S Navy needs to confront a new generation of threats at sea.”

VENOM features a hull made from high-density polyethylene (HDPE), providing exceptional durability and strong resistance to hull fouling. Partner Tideman Marine is the world leader in welded HDPE vessel construction in terms of total number of boats, total number of contracts, and pedigree of success.

Designed to meet future demands, VENOM is architected to enable mission-level collaboration amongst large numbers of autonomous vessels – a key enabler of the Navy’s vision for large scale USV operations.

Further information about the VENOM unmanned surface vehicle is available on the Scientific Systems [website](#).