Insitu Upgrades Integrator VTOL Launch and Recovery System



FLARES VTOL kit paired with Integrator UAS at Insitu headquarters in Bingen, Washington.

BINGEN, Wash., December 17, 2025 – Insitu, A Boeing Company, in collaboration with Hood Tech, releases the latest capability upgrades for the revolutionary Flying Launch and Recovery System (FLARES) for long-endurance Integrator UAS. These updates further enhance the resilience of the system to withstand the demands of the harshest environments on long deployments, with greater communications capability, solidifying Insitu's place as the leader in US uncrewed aerial systems.

"Our updated, resilient VTOL kit for multi-mission Integrator is a game-changer for customers that need truly expeditionary

capability in challenging electronic and climatic environments," said Diane Rose, Insitu CEO. "This enhanced resilience paired with battle-proven Integrator's long endurance and multi-intelligence payload capacity enables our customers to fly expanded mission sets with confidence anytime, anywhere, even in the most contested environments."

This latest FLARES update introduces a suite of relevant resilience and performance enhancements that elevate the system's operational effectiveness, safety and reliability in even the most demanding environments, making it ideal for diverse maritime and land-based missions. The updates include:

- **Improved Environmental Resilience**: Engineered to withstand challenging climatic and operational conditions, including heavy seas, high winds, adverse weather, and complex terrain.

- **Encrypted GPS Options and Jam-Resistant Datalinks**: Enhanced security and communication reliability, ensuring mission success even in contested and denied environments.

- **Updated Navigation Solutions for GNSS-Contested Operations**: Optimized flight performance when operating in electronically contested environments, ensuring mission-critical autonomy.

- **Improved Supportability**: Rapidly replaceable components such as propellers reduce downtime and simplify in-field maintenance. With redundancies built into its inherently robust design, FLARES remains easy to operate and

remarkably durable.

- **Increased Launch Weights**: Enables enhanced payload flexibility while maintaining endurance and range.

“Throughout qualification testing together with Insitu, we find ourselves continuing to fly FLARES in more wind, more precipitation and more deck motion than our competitors,” said Hood Tech Mechanical’s Lead Engineer, Cory Roeseler, “We have the test range to ourselves in adverse weather, and we’re pleased to see opportunities arise as customers gravitate towards our safe, robust and very capable system”.

FLARES enables operators to launch and recover Integrator in confined areas as small as a 10×10 meter footprint without sacrificing endurance (up to 27.5 hours), range (up to 2,000 nmi, point-to-point), or payload capacity (up to 50 lbs across 10 bays).

Integrator is also equipped with multiple SATCOM BLOS control options, including support for Proliferated Low Earth Orbit (PLEO) SATCOM, allowing for remote-split operations and missions conducted at unprecedented distances with ease.

FLARES is available for current and future Integrator customers with no aircraft modifications required. Setup remains quick and easy, enabling rapid packing, deployment, and transport down range in challenging environments.

When paired with Insitu’s modular Common Ground Control System and INEXA Control, FLARES delivers a truly expeditionary VTOL Group 3 UAS capability, enabling operations in contested electronic environments and harsh climates around the world.

Integrator VTOL continues to be optimized for both maritime

and land applications, delivering dependable performance in extreme conditions. This system provides versatile solutions to meet multi-domain intelligence, surveillance, and reconnaissance (ISR) needs for government and commercial operators worldwide.

With the release of these FLARES upgrades, Insitu and Hood Tech build on their combined mission to provide cutting-edge unmanned systems that meet the multi-intelligence, multi-domain, long-endurance demands of modern operations.