FLARES (Flying Launch and Recovery System)

Insitu’s revolutionary solution to expeditionary operations

In collaboration with our technical partners, Insitu is working to expand launch-and-recovery options while significantly shrinking the operational footprint and cost of ground support equipment of unmanned aircraft.

OPERATIONAL CAPABILITY AND BENEFITS

- **Launches from air**: Enables UAV to deploy from almost anywhere on land by carrying the aircraft above surrounding obstacles, eliminating the need for a clear avenue to the sky.
- **Enables in-flight recovery**: Captures UAV in air, eliminating reliance on ground recovery.
- **Broadsens accessibility**: Expands the acceptable environments from which unmanned aircraft operations are possible, including jungles, courtyards, or other settings that inhibit launch and recovery procedures.
- **Increases portability**: Dramatically reduces transportation requirements for remote sites by eliminating the need to transport and assemble full-scale launch-and-recovery equipment.
- **Utilizes haulable packaging**: Fits in eight 80.75” x 22.43” x 14.97” (205 x 56.9 x 38 cm) aircraft cases, including two air vehicles, two FLARES, ground control system, spares, and fuel.
- **Modular logistics support**: Ground support package is easily customizable depending on operational length and requirements.

PROJECT ROADMAP:

- In 2014, Insitu and Hood Tech Corp. built a FLARES prototype with readily available consumer off-the-shelf and custom-fabricated components.
- Proof of concept flights successfully demonstrated ScanEagle capture in December 2014.
- Proof of concept flights successfully demonstrated captive carry in July 2015. This prototype was capable of handling a low-weight ScanEagle.
- Launch and recovery successfully demonstrated in August 2015.
- Further development will focus on increased UAV launch weight, system reliability, manufacturability, and maritime capabilities.

Initial prototype built with readily available consumer off-the-shelf and custom-fabricated parts. Flight demonstrations using UAV.