

TERRESTRIAL SENSOR CAPABILITIES

Areté is an advanced science and engineering Employee-Owned Small Business that provides innovative sensing solutions — from scientific discovery through prototyping to production. Areté's smart systems include active and passive sensors, real-time processing, software, and complex algorithms that operate from seafloor to space.



Areté

DISCOVER. DEVELOP. DELIVER.



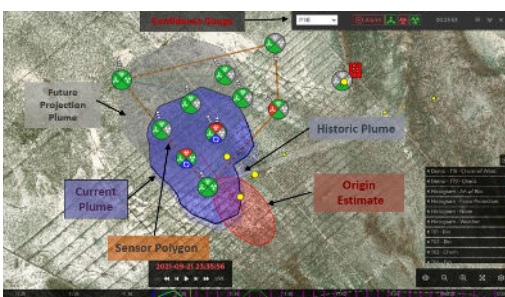
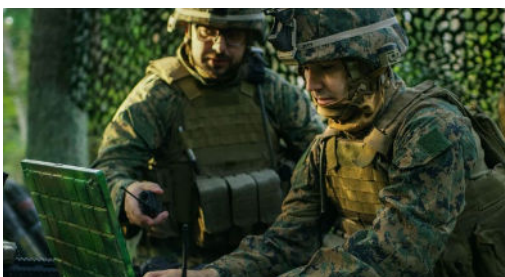
LiSA – LIDAR for Situational Awareness

- **TRL:** 9
- **Discriminators:** Low Size, Weight & Power, long range (2Km).
- **SWaP:** 10"x 29.5"x 12", 30lbs, 250W max, normal operation 120W.
- **Status:** Full Rate production, capable of higher rate.
- **Operations:** Currently deployed to Europe on MEDEVAC UH-60s and SOCOM MH-47s and MH-60 Blackhawks.
- **Description:** LiSA is a state-of-the-art LIDAR delivering unparalleled levels of real-time situational awareness, especially in Degraded Visual Environments. LiSA also provides wire-strike/obstacle avoidance, and Landing Zone Assessments, reducing pilot cognitive burden.



AIRTRAC-LP – For Laser Designators

- **TRL:** 9
- **Production:** Low Rate, Full Rate production starting January 2023.
- **Discriminators:** Low Size, Weight, and Power. Customizable deployment.
- **SWaP:** 2.72" x 1.94" x 1.25", 250 g w/ electronics.
- **Status:** Component of the USMC NGHTS designator system, multiple versions for different use cases.
- **Description:** Areté's standard AIRTRAC-LP is a ruggedized laser with >50 mJ pulse energy. NATO STANAG 3733 capability in a very compact, lightweight and low power consumption configuration. The athermal design provides high laser pulse energy over the full MIL-SPEC temperature range with low beam divergence and a full system weighing less than 320 grams.



TANDOM – Sensor Fusion

- **TRL:** 9
- **Production:** Full Rate.
- **Discriminators:** Sensor Agnostic, Real-Time multi-int sensor fusion for CWMD and Environmental threat mission spaces via standard I/O protocols.
- **SWaP:** TANDOM operates on a range of platforms from low swap processors to cloud installations.
- **Status:** Currently deployed on nine OCONUS locations.
- **Description:** TANDOM is a real-time, tactical software toolkit for enhancing actionable decision making. Providing inputagnostic processing, TANDOM captures inputs from sensors, video, and environmental feeds and converts them to context-based information streams.



AIMS – Automated Image-Based Monitoring System

- **TRL:** 7
- **Production:** Prototyping, integrated into Ascent's Spirit Drone.
- **Discriminators:** Real-time, remote triage, documents injuries from point-of-injury to point-of-care.
- **SWaP:** Software packages on a chip, integrated into any camera – UAV, UAS, fixed site.
- **Description:** Integrated software employing a Deep Neural Network and Computer Vision to remotely locate, characterize, and monitor combat casualties.



AIRTRAC-HP

- **TRL:** 9
- **Production:** Low Rate Production begun in January 2025.
- **Discriminators:** Low Size, Weight, and Power. Customizable mechanical configurations. Multiple divergence options depending on application. Frequency-doubled 532nm version. Dual-use, ITAR-free design.
- **SWaP:** 3.5" x 3.2" x 2.0", 320g cavity, 630g w/ electronics and 6X BEX telescope.
- **Status:** Integrated into multiple CUAS and long-range designation systems.
- **Description:** Areté's AIRTRAC-HP is a ruggedized laser with >100 mJ pulse energy. NATO STANAG 3733 capability in a very compact, lightweight and low power consumption configuration. Low risk design leverages proven AIRTRAC LP electronics, optics, software, and resonator.



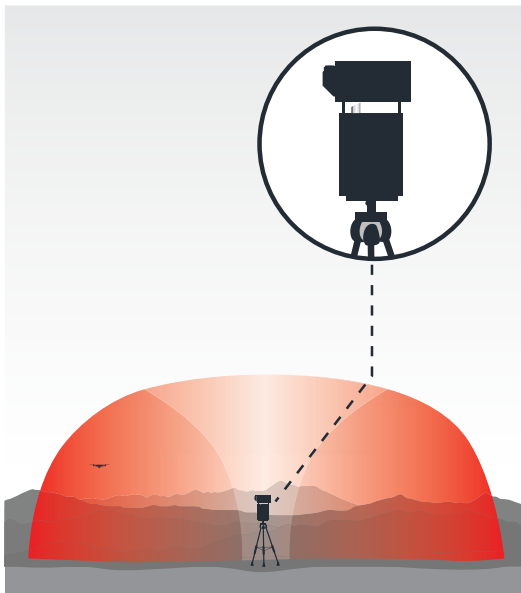
Basilisk – CUAS Detector

- **TRL:** 8
- **Discriminators:** Totally passive, low false alarm rate, identifies sUAS swarms at 1Km, larger UAVs at >2KM, one-man carry/emplacement, battery powered.
- **SWaP:** 16.5" diameter x 4.2" ~20lbs, 400W.
- **Status:** Low Rate Initial Production.
- **Description:** A low SWaP-C UAS Detection and Tracking System for force protection applications. A tethered system providing 360 degree coverage, with a ruggedized offboard processor.



Crosswind – Air Direction Measurement Ballistic Calculator

- **TRL:** 7
- **Discriminators:** Low SWAP down-range crosswinds measurements to 800 meters.
- **SWaP:** 9" x 8" x 3.5", 5.2 lbs, four C123 lithium batteries (12V total).
- **Status:** Phase II SBIR completed, three prototypes delivered to PEO Soldier.
- **Description:** A low-SWAP downrange crosswinds sensor with build-in ballistics calculator enhancing sniper precision at long ranges.



WATD – Wide-Area Threat Detector

- **TRL:** 5
- **Discriminators:** Hemispheric warning of UAS.
- **SWaP:** Vehicle mounted, 20W optical Power, 532 Nanometer.
- **Status:** SBIR Phase II with ONR.
- **Description:** Provides 3D day/night tracking capability of UAVs and rapid detection of chem-bio dispersal plumes. Eyesafe.

