AIRBORNE MARITIME SENSORS

Areté develops advanced optical systems for airborne platforms, including infrared and electro-optical imaging, targeting, and reconnaissance. These systems are used in both military and commercial applications, enabling precise surveillance and targeting.

Areté

DISCOVER. DEVELOP. DELIVER.

PILLS – Pushbroom Imaging LIDAR for Littoral Surveillance

- **TRL:** 9
- **Discriminators:** Low-SWaP, high resolution, accuracy.
- **Production:** Currently low-rate, can ramp up.
- **SWaP:** 40” l x 11” w x 8” h, installed 45 lbs, 224W.
- **Status:** ONR and NAVIAR Test Bed and commercially used by Fugro (RAMMS).
- **Description:** PILLS is a low-SWaP airborne LiDAR providing bathymetric capabilities utilizing Arete’s Streak Tube Imaging LIDAR (STIL) technology. PILLS is capable of hydrographic survey with an alternate mission capability.

COBRA – Coastal Battlefield Reconnaissance and Analysis

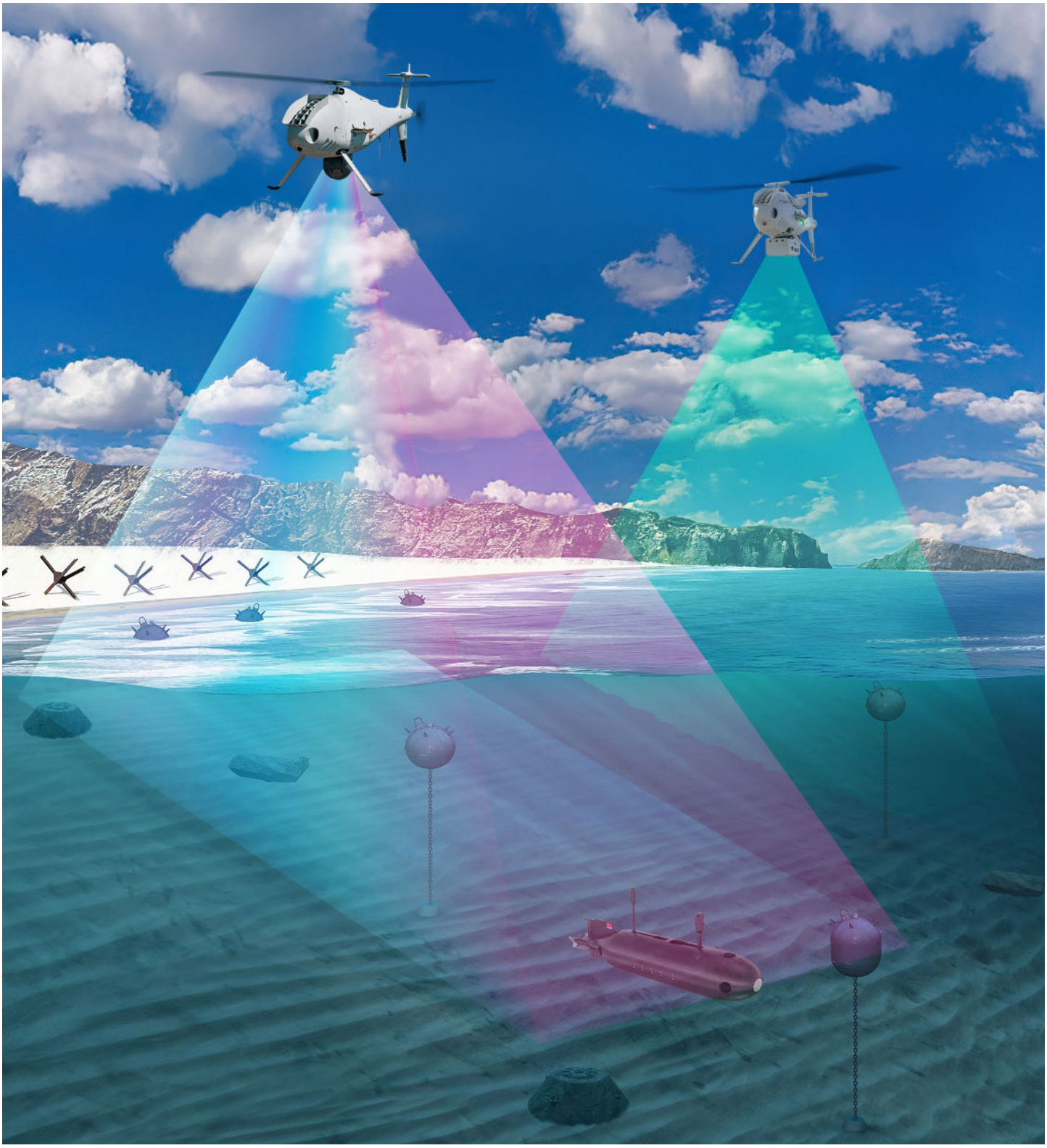
- **TRL:** 9
- **Discriminators:** Unmanned, real-time, multispectral, high-resolution, passive imaging, large search area, low false alarm rate.
- **Production:** 12 systems produced, current configuration in sustainment.
- **Status:** Deployed with the U.S. Navy IOC in CY2017. Current contract for integration on the MQ-8C.
- **Description:** The AN/DVS-1 COBRA system is a passive multispectral sensor system that is used to conduct unmanned aerial tactical reconnaissance in the littoral battlespace for daytime detection and localization of minefields and obstacles in the surf zone, beach zone, and beach exit zone prior to an amphibious assault.

Receiver Sensor Assembly ALMDS – Airborne Laser Mine Detection

- **TRL:** 9
- **Discriminators:** High search area, active imaging, low false alarm rate.
- **Production:** 29 systems produced, currently producing system for ROK.
- **SWaP:** Single pod, 107” length, 21” diameter, 850lbs.
- **Status:** Deployed with the U.S. Navy IOC in CY2016 and some allied navies.
- **Description:** Areté supplies the Receiver Sensor Assembly containing the STIL sensors, laser timing electronics, and transmit optics. ALMDS is a laser-based AMCM high area coverage system utilizing Streak Tube Imaging LiDAR (STIL) to detect, classify, and localize surface and near-surface moored sea mines in both day and night operations. ALMDS is integrated with the MH-60S and MCH-101 helicopters to provide rapid wide-area reconnaissance and assessment of mine threats in littoral zones.

AMSI – Advanced Multispectral Imager

- **TRL:** 7 by Summer of 2026
- **Discriminators:** Unmanned, real-time, multispectral, highresolution, passive imaging, large search area, low false alarm rate.
- **SWaP:** 412x284x283 mm, 43.5 kg.
- **Status:** Currently in development.
- **Description:** The AMSI system development effort is an update to the AN/DVS-1 COBRA system. It is a passive multispectral sensor system with real time processing that is used to conduct unmanned aerial tactical reconnaissance in the littoral battlespace for daytime detection and localization of minefields and obstacles in the surf zone prior to an amphibious assault.



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