Areté

BASILISK®

UAS/Swarm Detection and Tracking

Basilisk is an unmanned air systems (UAS) detection and tracking device. Basilisk is a tethered system comprised of modular pucks with coverage ranging from 45 to 360 degrees, with a ruggedized offboard processor. This enables dynamic day operations and deployments. Basilisk uses multiple neural network classifiers resulting in low false alarm rate and high detection confidence. Basilisk uses commercial off-the-shelf hardware in a unique configuration paired with advanced ML algorithms for enhanced detection and tracking of UAS's and UAS swarms.

Key Features

- Completely passive operations, undetectable via RF sensing
- Simultaneous tracking and classification of hundreds of targets at 5km
- Detection and tracking in high clutter environments
- Low Size, Weight, Power, and Cost (SWaP-C)
- Commercial Off-The-Shelf (COTS) hardware
- Modular design supports many different deployment configurations

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1x module: 1.6 lbs

2x module + 1 Base Hub: 4.8 lbs

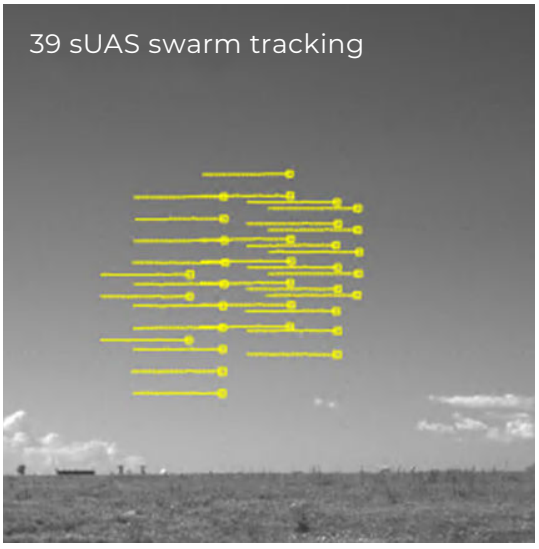
3x module + 1 Base Hub: 6.4 lbs

4x module + 1 Base Hub: 8 lbs

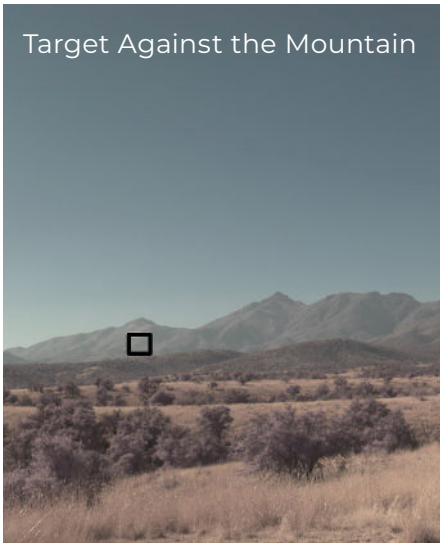
Technical Specification

Field of View	45^0 x 45^0 (1 module)
Instantaneous Field Of View (IFOV)	171 µrads
Refresh Rate	5 Hz
Detection Range	5 km (Assumes RQ-20 Puma Class 1 UAS)
Size (Sensor)	5in x 5in x 3in (1 module)
COE (Common Operating Environment) Outputs	ISA / COT
Computer Size	7.5in x 15in x 7.5in
Computer Weight	17.2 lbs
Computer Rating	MIL-STD 810G Compliant
Weight per Camera Module	1.6 lbs
Base Hub Weight	1.6 lbs
Power	<400W for a 180deg FOV system

Simultaneous Drone Detection



Robust Detection in Variable Clutter



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