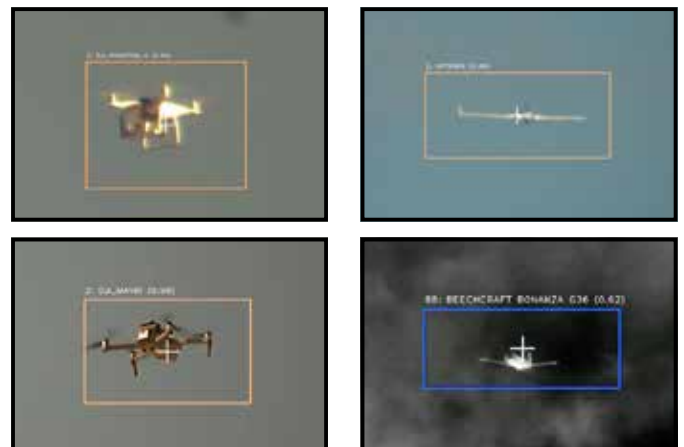# Aircraft Detection: Applying Artificial Intelligence to detect and identify Aircraft (fixed wing and rotary wing) to save lives and protect resources.

OVERVIEW

Artificial intelligence-based capability detects aircraft day or night, at a distance that allows effective security response. Integrates with an EOIR camera system via an artificially intelligent equipped computer. Automatically notifies resources to provide faster response time and take defensive and offensive action. Tracks the aircraft location in real time to provide a better defense.

TECHNICAL

Even dedicated and trained personnel using the best camera system can't provide 100% real-time observation. A proactive solution is needed to detect aircraft threats to allow an effective defense. Exigent-DR, an artificial intelligence-based UAS detection capability developed for the US Army, offers that solution.

Exigent-DR can easily distinguish aircraft from other objects, day or night, in any weather condition.

EXIGENT-DR PROVIDES A RELIABLE, INTEGRATED METHOD TO:

1. DETECT
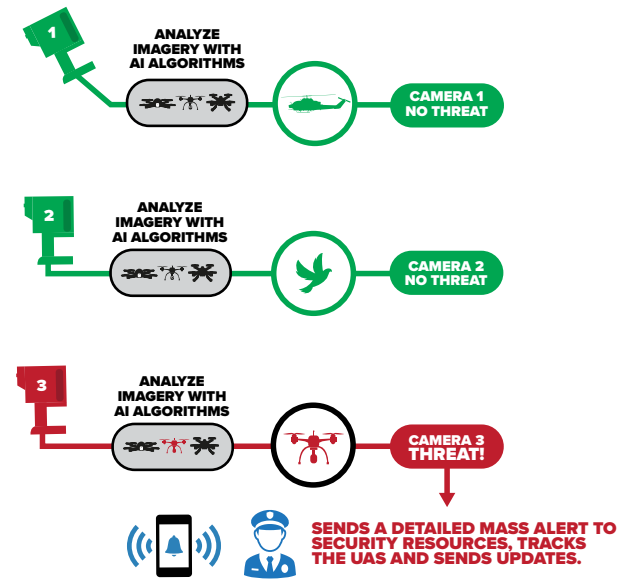Autonomously detect aircraft against any background, day or night.

2. IDENTIFY
Instantly analyze imagery using AI algorithms to determine type of aircraft.

3. ALERT
Automatically notify security officials via text message or email showing location and type of aircraft.

How Exigent-DR Works

1 ANALYZE IMAGERY WITH AI ALGORITHMS → CAMERA 1 NO THREAT

2 ANALYZE IMAGERY WITH AI ALGORITHMS → CAMERA 2 NO THREAT

3 ANALYZE IMAGERY WITH AI ALGORITHMS → CAMERA 3 THREAT!

SENDS A DETAILED MASS ALERT TO SECURITY RESOURCES, TRACKS THE UAS AND SENDS UPDATES.

Rugged EOIR Sensors
High resolution optics with pan/tilt and zoom capability.

Optimal Sensor Planning / Scheduling Algorithms
Optimally plans and tasks one or more sensors simultaneously.

AI Fusion-Based Detection and Identification
Low false alarm rates, high detection and identification accuracy.

3D Track State Estimation
Reports position, velocity and covariance.

Distributed or Centralized Operation
Single operations center or multi-vehicle cooperative CONOPs.

LOGISTICS & LICENSING
Exigent-DR is a standalone unit installed by Exigent.
Exigent-DR is licensed on a subscription basis.

REQUIREMENTS
Access to internet and 110V power

SECURITY / OPERATION
Exigent®-DR security features include role-based login, application authentication and message encryption. Further, the Exigent-DR Application Programmer's Interface (API) operates inside a docker container isolating the API from the rest of the system as an extra layer of security, while ensuring the software does not conflict with other required system dependencies.

Training is provided on how to operate Exigent-DR, and how to understand the output, with onsite training available. A training manual is provided, and Exigent provides call center support as well.

PRODUCT DETAILS

Product Name	Exigent®-DR
Version	2020
Manufacturer Part Number	A2020EXDR
Product Type	SAAS

EXIGENT®

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At Exigent, we believe in empowering businesses with intelligent solutions that drive efficiency, productivity, and innovation. Our comprehensive AI products offer a suite of capabilities including AI personal assistants, big data analytics and computer vision solutions.