Kaboom
Tactical VTOL UAS

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What we do

We develops and manufactures **tactical high-performance surveillance systems** for customers throughout the world.
Our company provides **state of the art cost effective solutions**, allowing the ability to detect, gather, process, analyze, and effectively react in real time.

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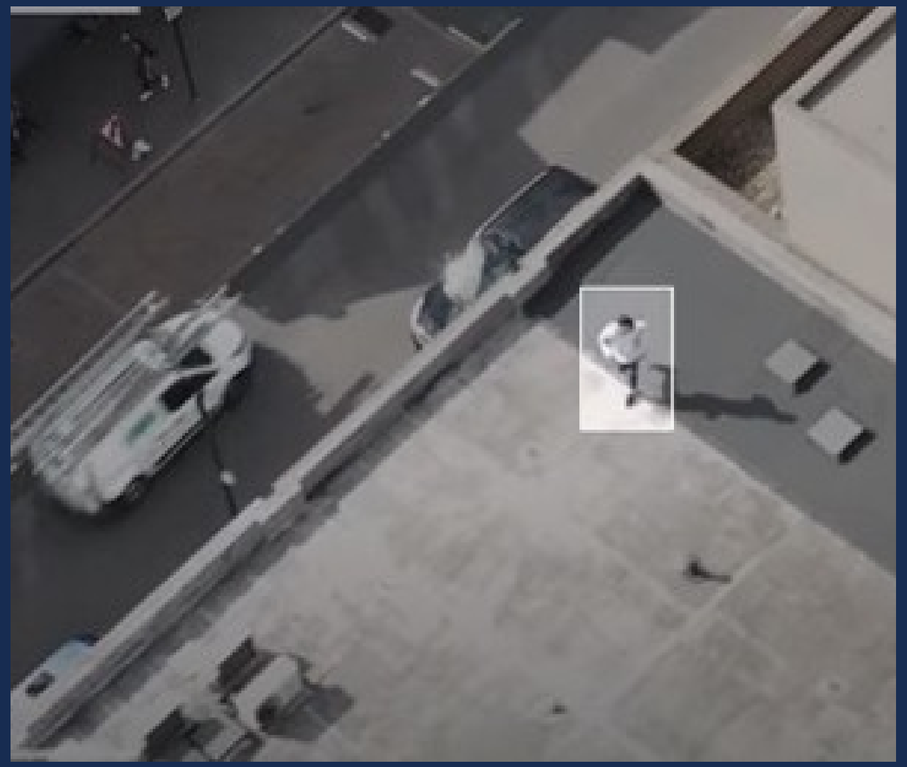
The challenges

- Get an **elevated view** to increase situation awareness.
- **Overcome** takeoff and landing limited area.
- **Fully exploit** the flight endurance, of fixed wing UAV’s.
- Fast tactical **deployment**.
- **Simple** operation.



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Overview

Kaboom-VTOL is an advanced Vertical Takeoff and Landing Unmanned air vehicle system designed **for rapid deployment, anywhere anytime.**

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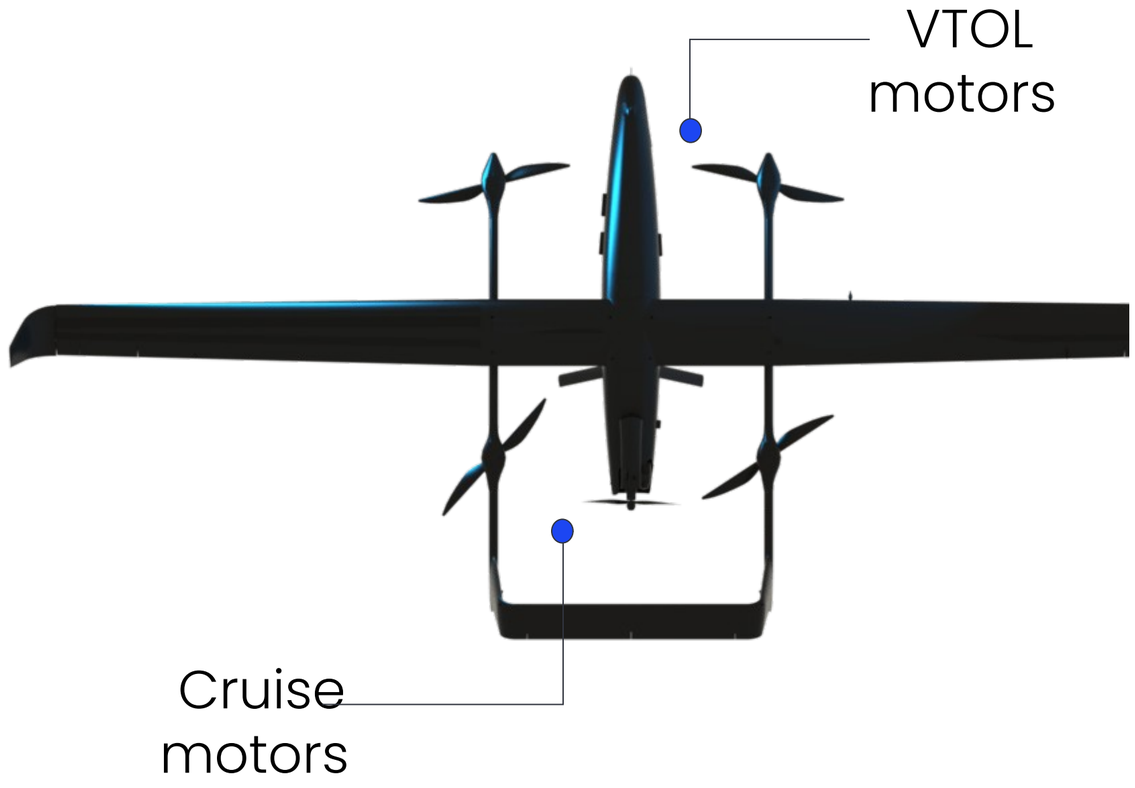
No runway,
No Launcher,
Minor logistics.

THE VTOL AERODYNAMIC CHALLENGE

The legacy VTOL configuration utilizes 4 motors for VTOL & one for cruise

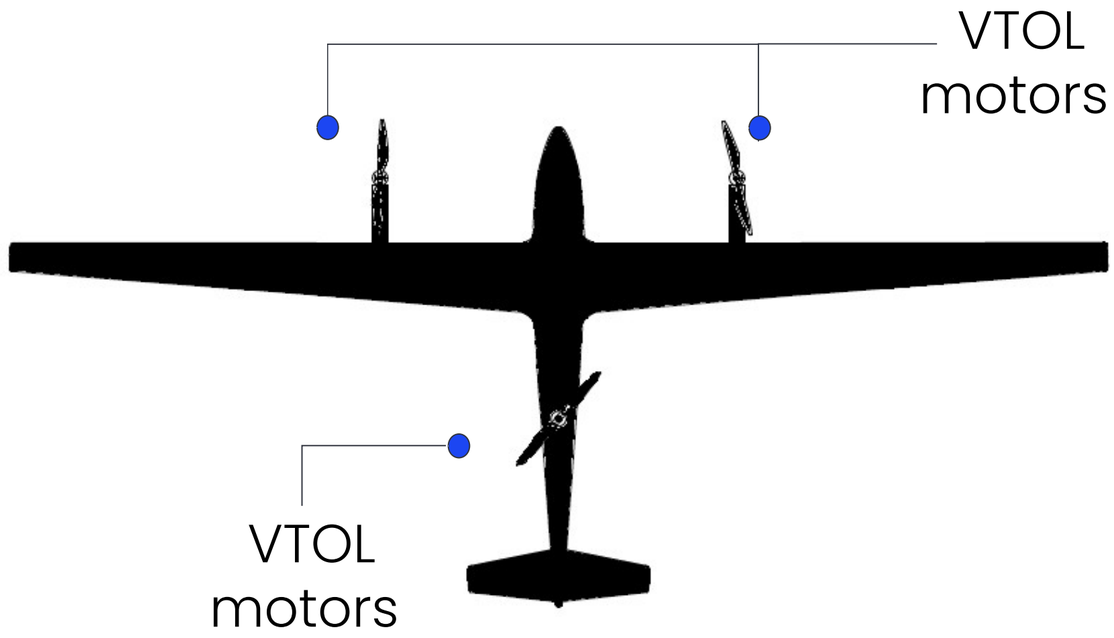
While cruising the VTOL apparatus create a huge amount of parasite aerodynamic drag, which might reduce the aerodynamic efficiency in up to 60 %



THE Kaboom AERODYNAMIC SOLUTION

Kaboom utilizes only 3 motors for VTOL

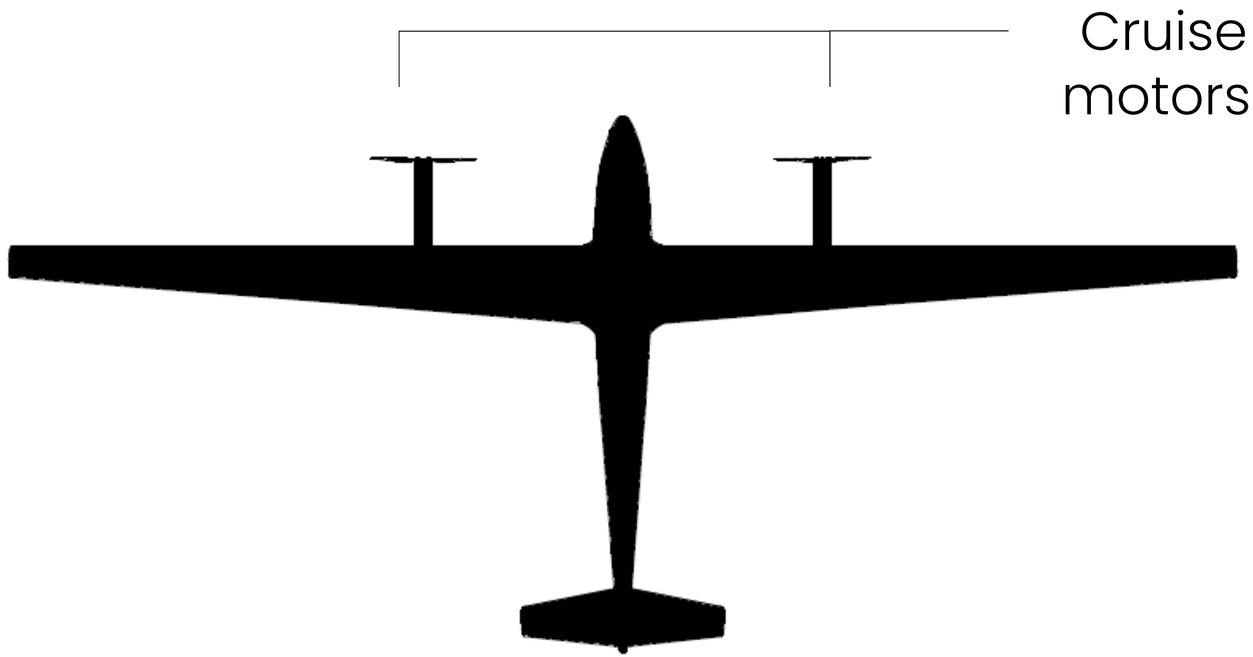
No parasite aerodynamic drag



THE Kaboom AERODYNAMIC SOLUTION

Kaboom utilizes only 3 motors for VTOL and uses 2 of them for cruising

No parasite aerodynamic drag



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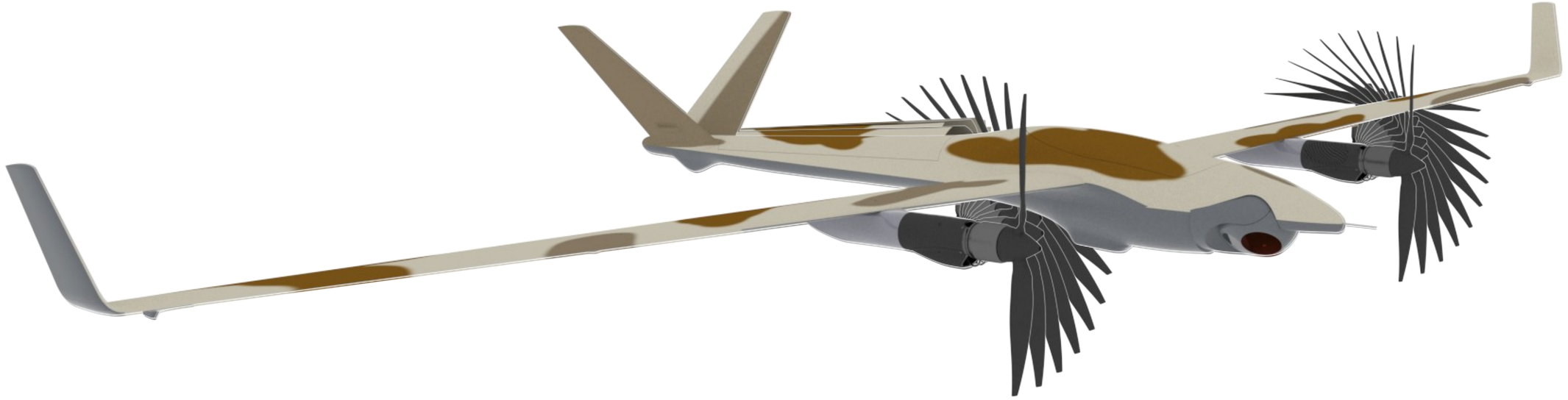
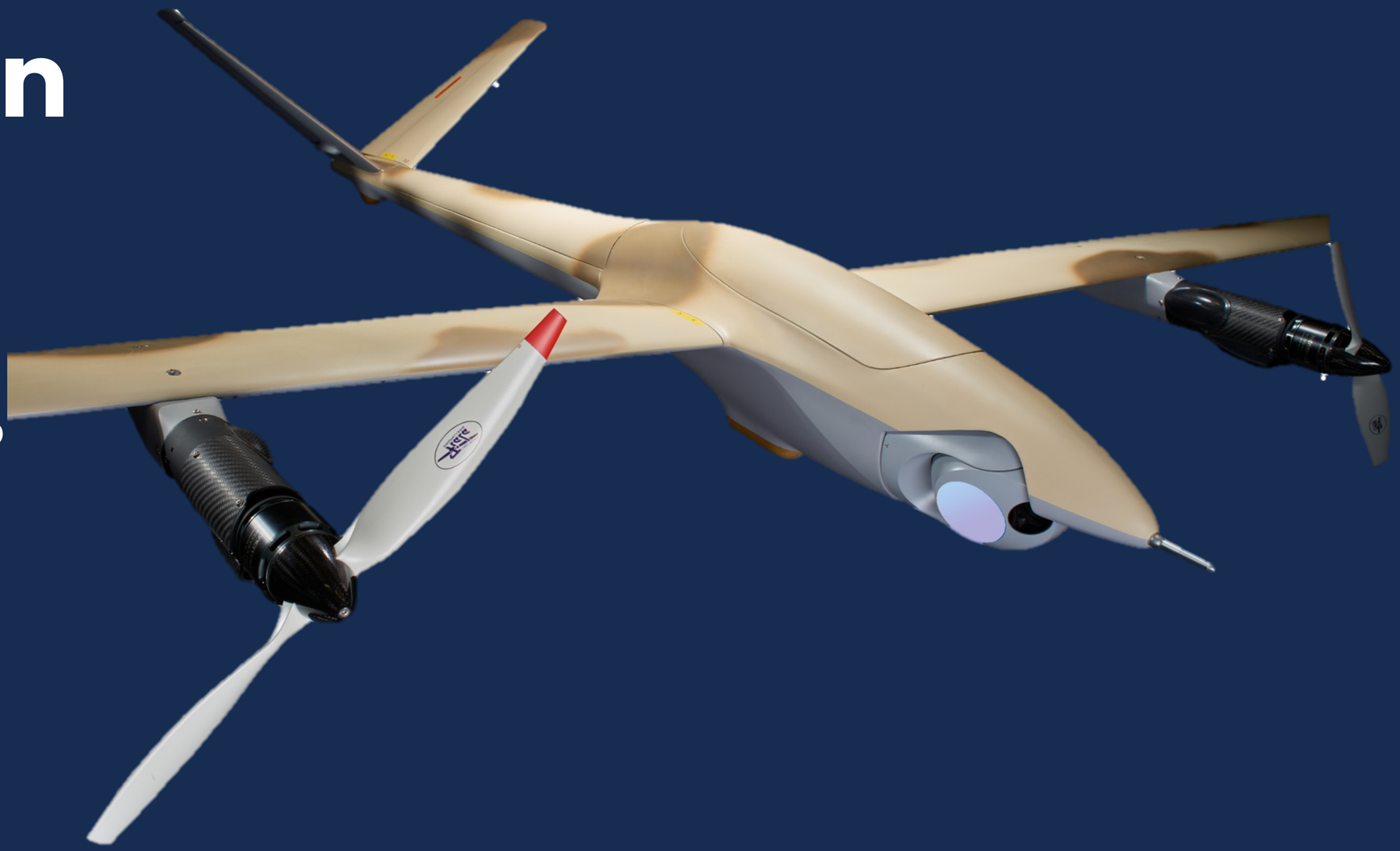



PW
SD
SN: 76
FCV:3.0

Aerodynamic Payload Integration

Designed in-house, the Kaboom VTOL and its EO/IR payload are perfectly integrated to minimize drag



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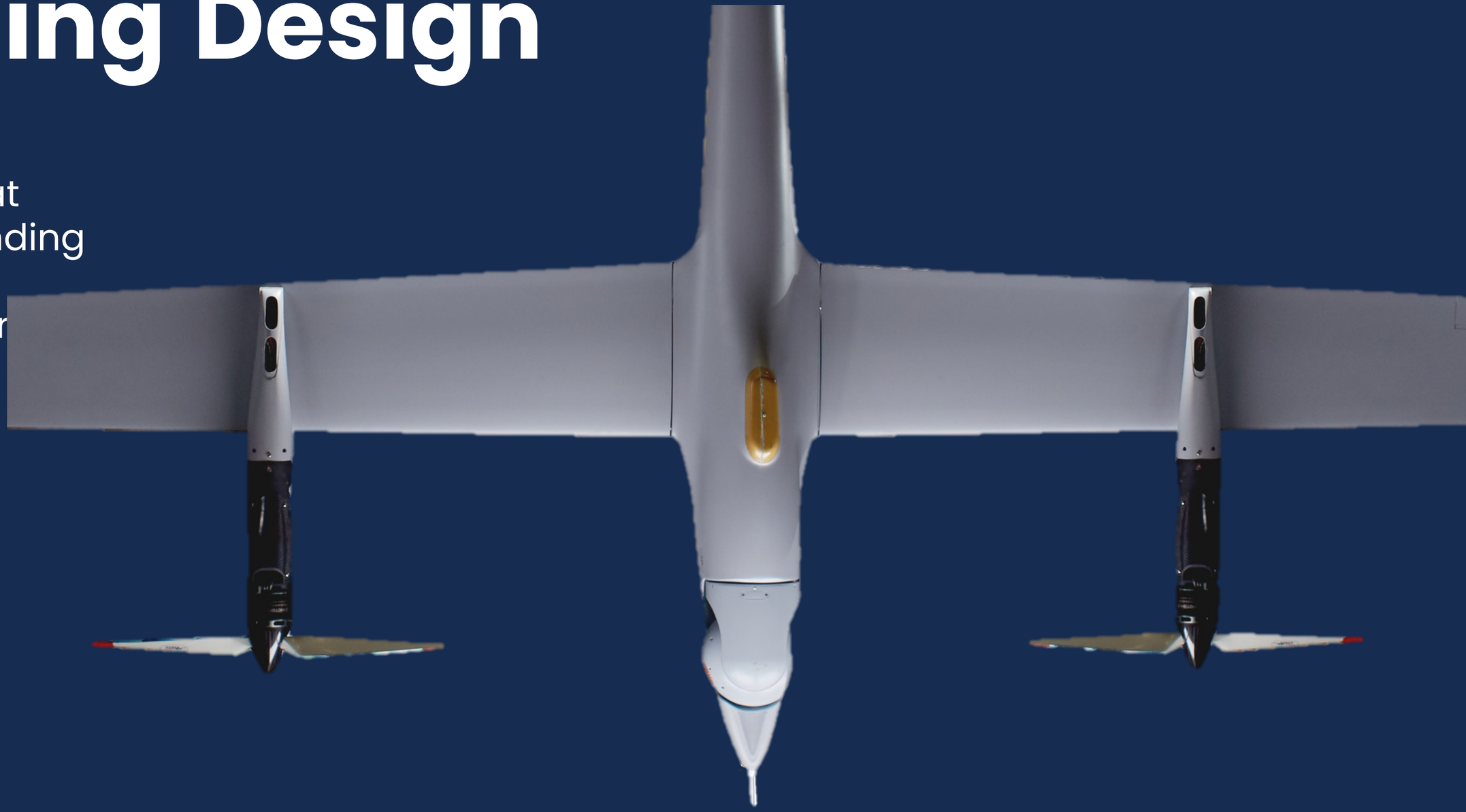
Aerodynamic Landing Design

A design that removes landing gear and minimizes dr



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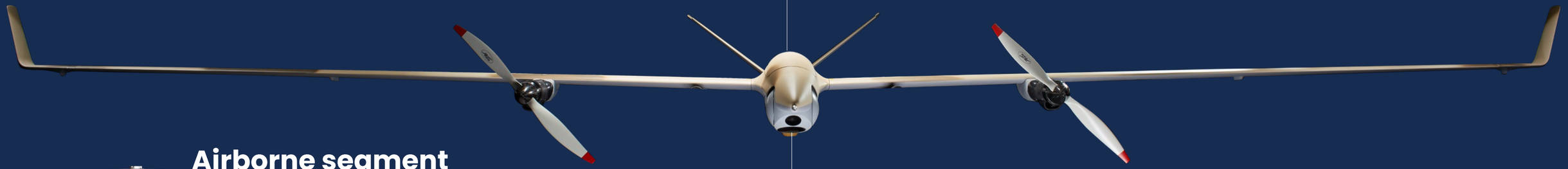
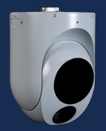
System Composition

Airborne segment
Kaboom Tactical VTOL UAS

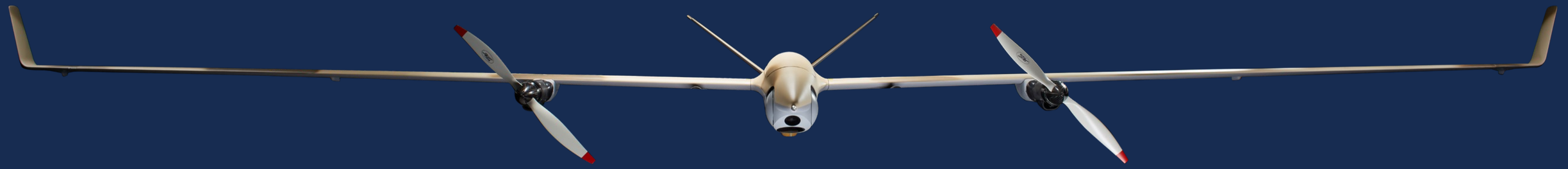




Airborne segment
Integrated camera

Ground segment

Ground segment



Air vehicle

No. of motors for VTOL	No. of motors for cruise	Wingspan	Fuselage length	Propulsion Type	Duration	Navigation / Stabilization	Maximum takeoff weight	Control
3	2	4.3 m	1.7 m	Electric	Up to 2.5 hours	IMU, GPS	17 Kg	Fully autonomous

Technical Specs

EO/IR payload

Parameter		
Day Camera	Type	HD
	FOV	54° to 4°(2°DFOV)
Night Camera	Type	LWIR 512x640 12µ 30/60 Hz
	FOV	Optical Continuous 30° to 5.8° (3.5°DFOV)
Gimbal	Field of Regard	Pan: Continuous 360° Tilt: +90°to-110°
	Stabilization	<80 µrad
Communication		Control - RS232, Ethernet Video out - 10/100 BASE-T Ethernet PHY. UDP, TCP, and RTSP connectivity, unicast, multicast
Video Output		H.264/H.265/MPEG4/M-JPEG encoding, MPEG2 TS/RTP encapsulation
Video Tracker		Yes
Dimensions	Diameter	140mm
	Height	172mm
	Weight	g 1350
Electronics	Operating Voltage	12-24V
	Power Consumption	11W average / 25W Max
Temperature		-10°C to +55°C

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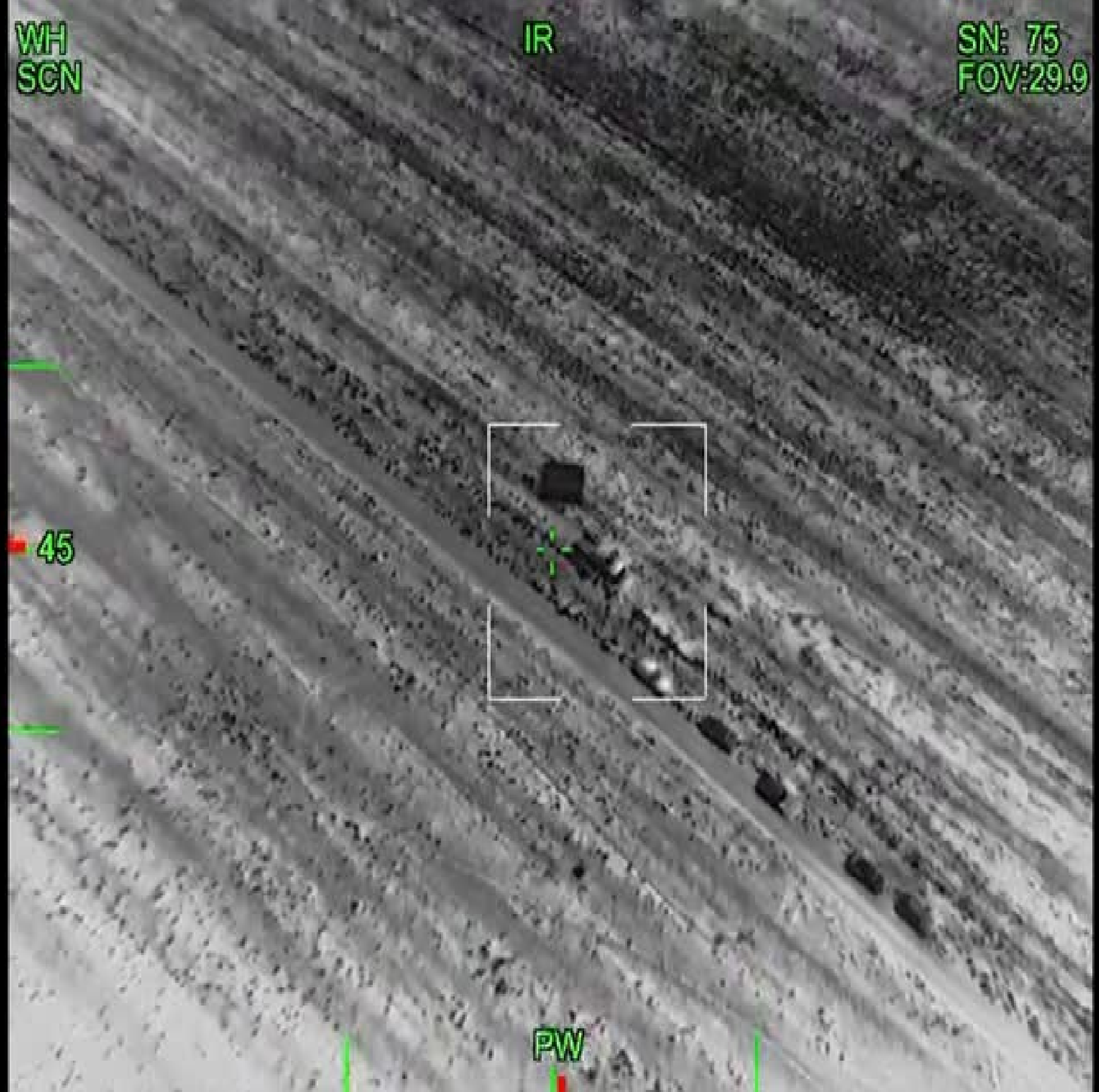
Technical
Specs

Thermal channel

Continuous optical zoom



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Technical
Specs

Day channel Optical zoom & Auto Tracking

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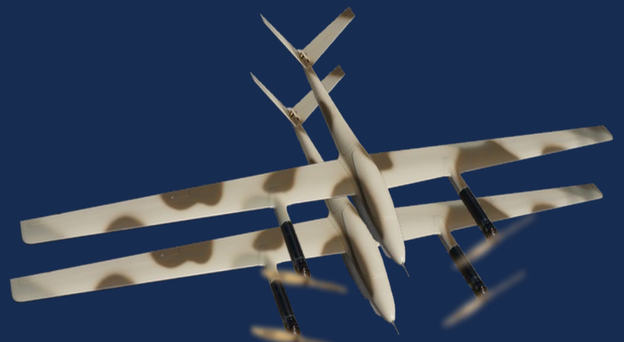
STANDARD SYSTEM CONFIGURATION



x2 UAV’s

x2 Dual sensor stabilized payload

x1 Set of spare parts

x1 GCS

x1 Set of support equipment

x1 GDT

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Ground Control Station (GCS)

- Designed for maximum mobility
- Equipped with ruggedized touch-screen tablet PC running an advanced powerful mission software
- Designed for outdoor, all-weather operation
- Tailored for ease

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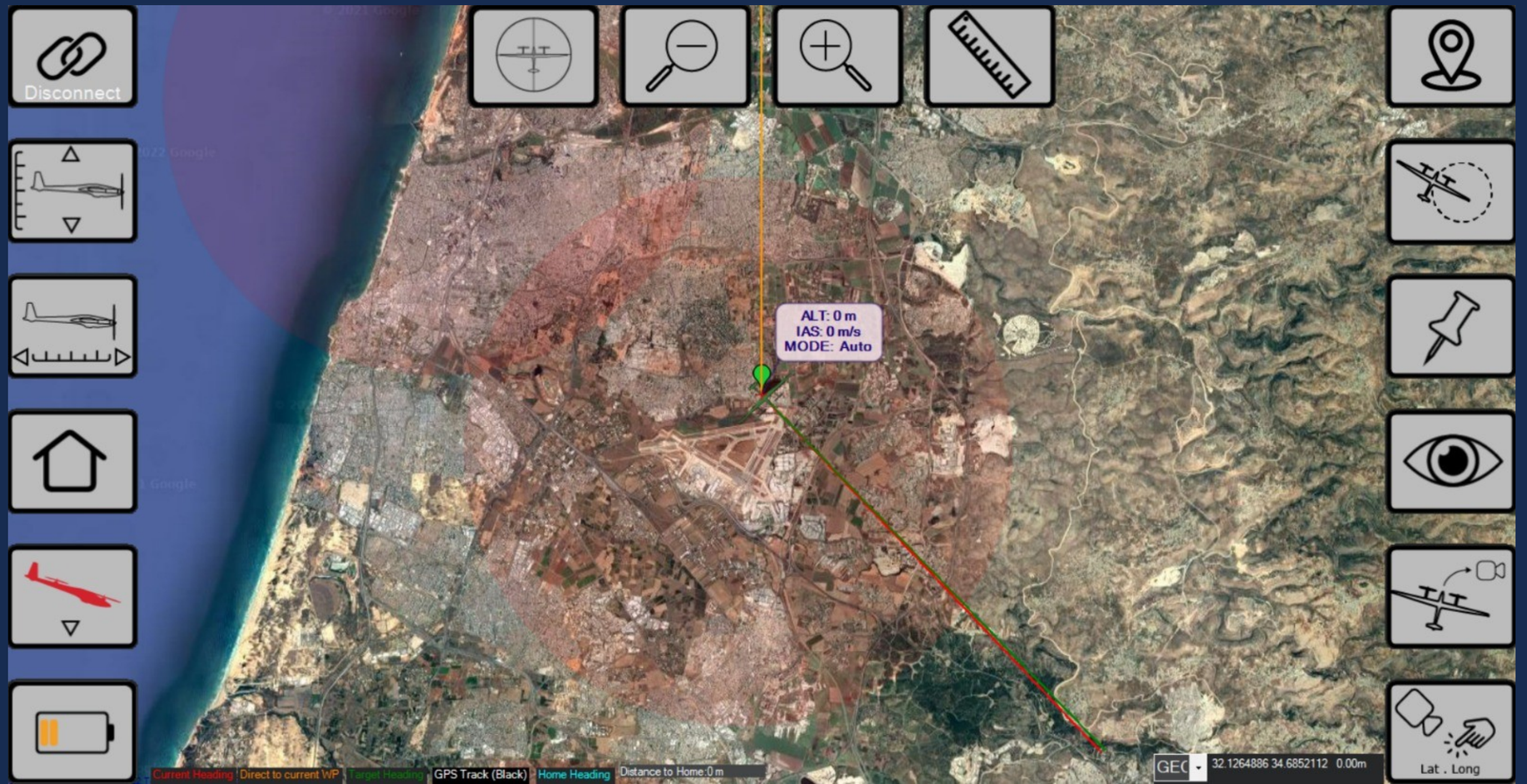
Mission Software

- Displays all the needed flight data
- Real time video image allowing the operator to define targets, coordinates, etc.



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Ground Data Terminal (GDT)

- **Auto tracking**
- **High gain 19 dBi antenna**
- **Design for outdoor, all-weather operation**
- **Practical design**

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Deployment

- Kaboom VTOL is optimized for versatility, Designed for both dismounted and vehicle-based operations
- Doesn’t require any infrastructure for take of & landing.
- Full deployment under 15 min by a team of 2.
- Capable of ongoing operations , Engineered to withstand demanding environments
- User-Centric design

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Thank you