



Kaboom Tactical VTOL UAS



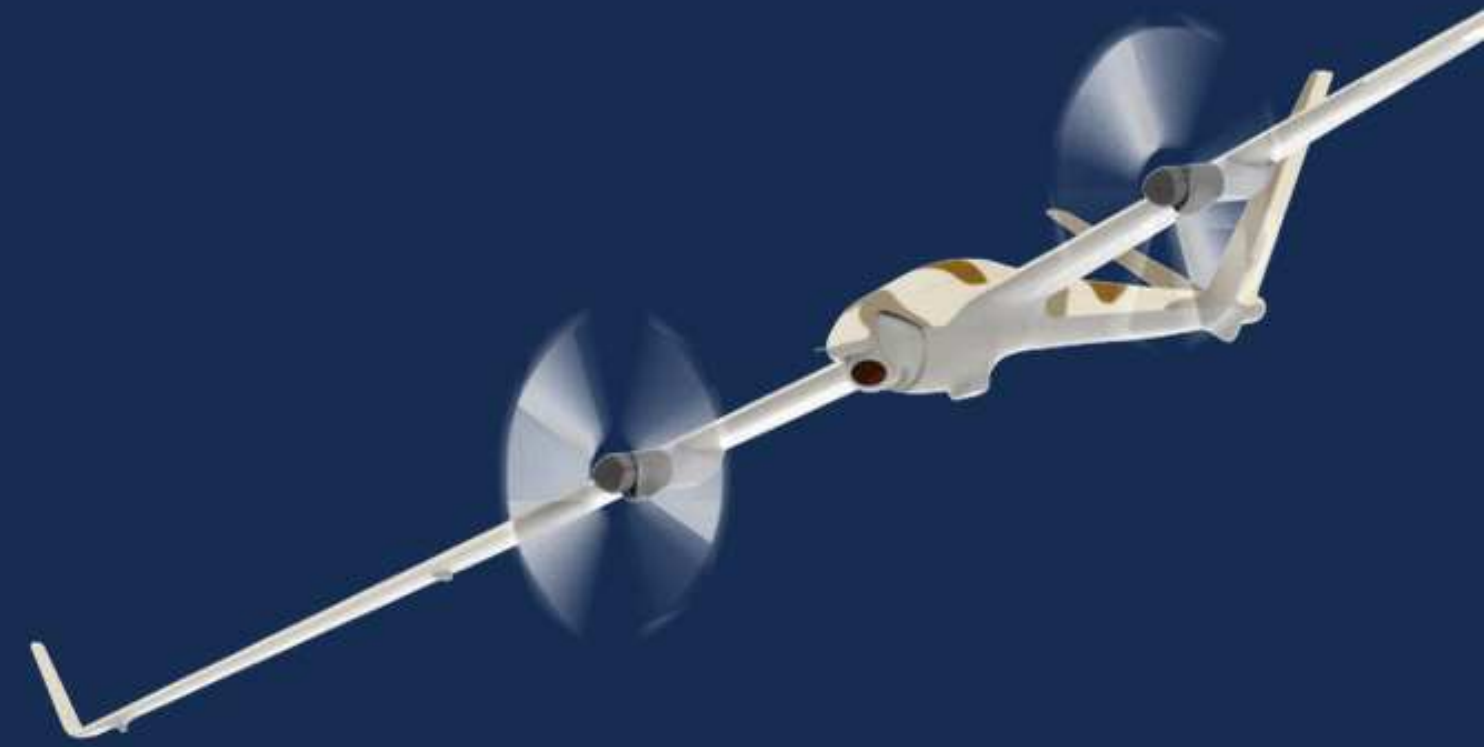
What we do

We develop and manufacture **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.



Overview

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



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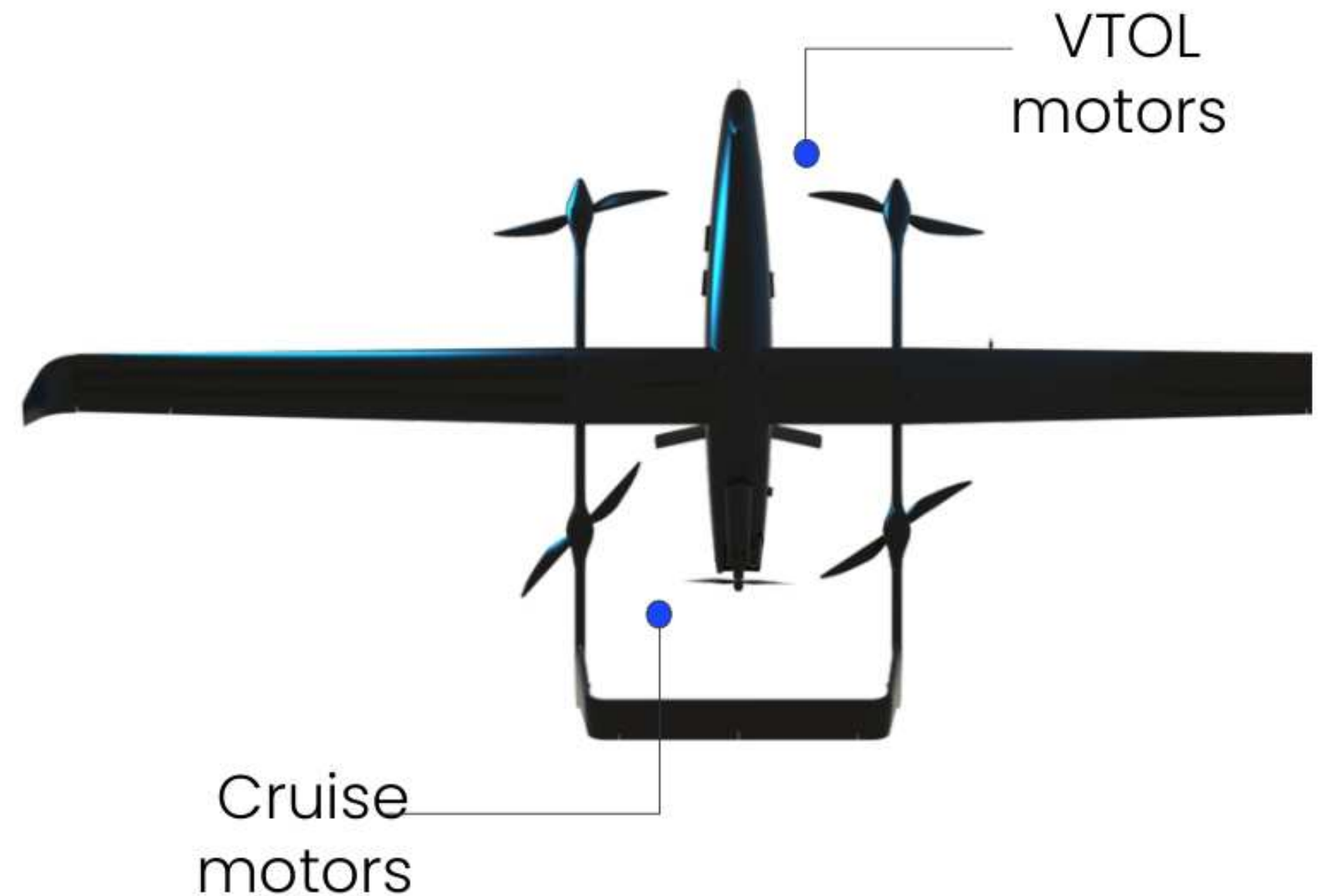


No runway,
No Launcher,
Minor logistics.

THE VTOL AERODYNAMIC CHALLENGE

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

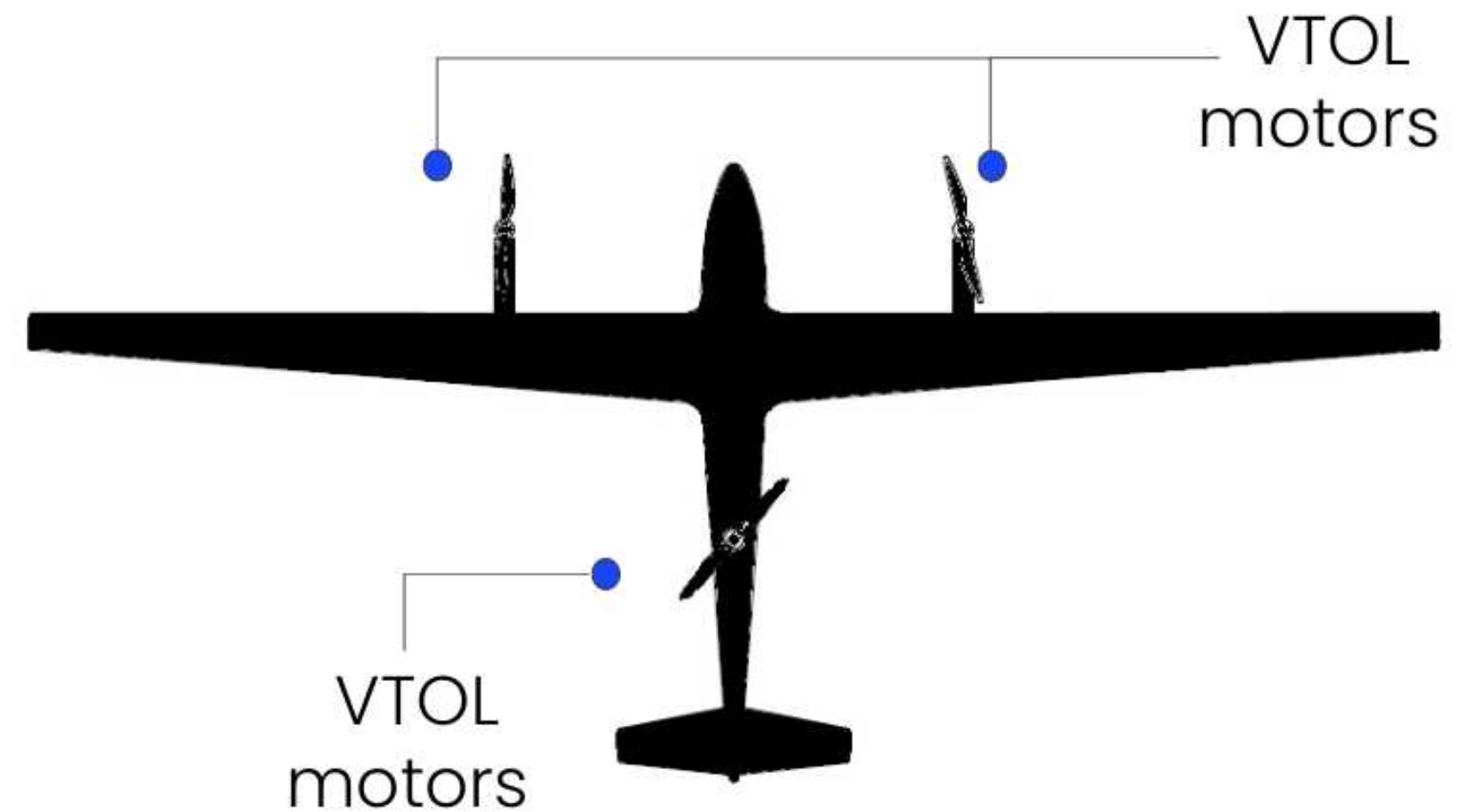
While cruising the VTOL apparatus create a huge amount of parasite aerodynamic drag, which might reduce the aerodynamic efficiency in up to 60 %



THE Kaboom AERODYNAMIC SOLUTION

Kaboom utilizes only 3 motors for VTOL

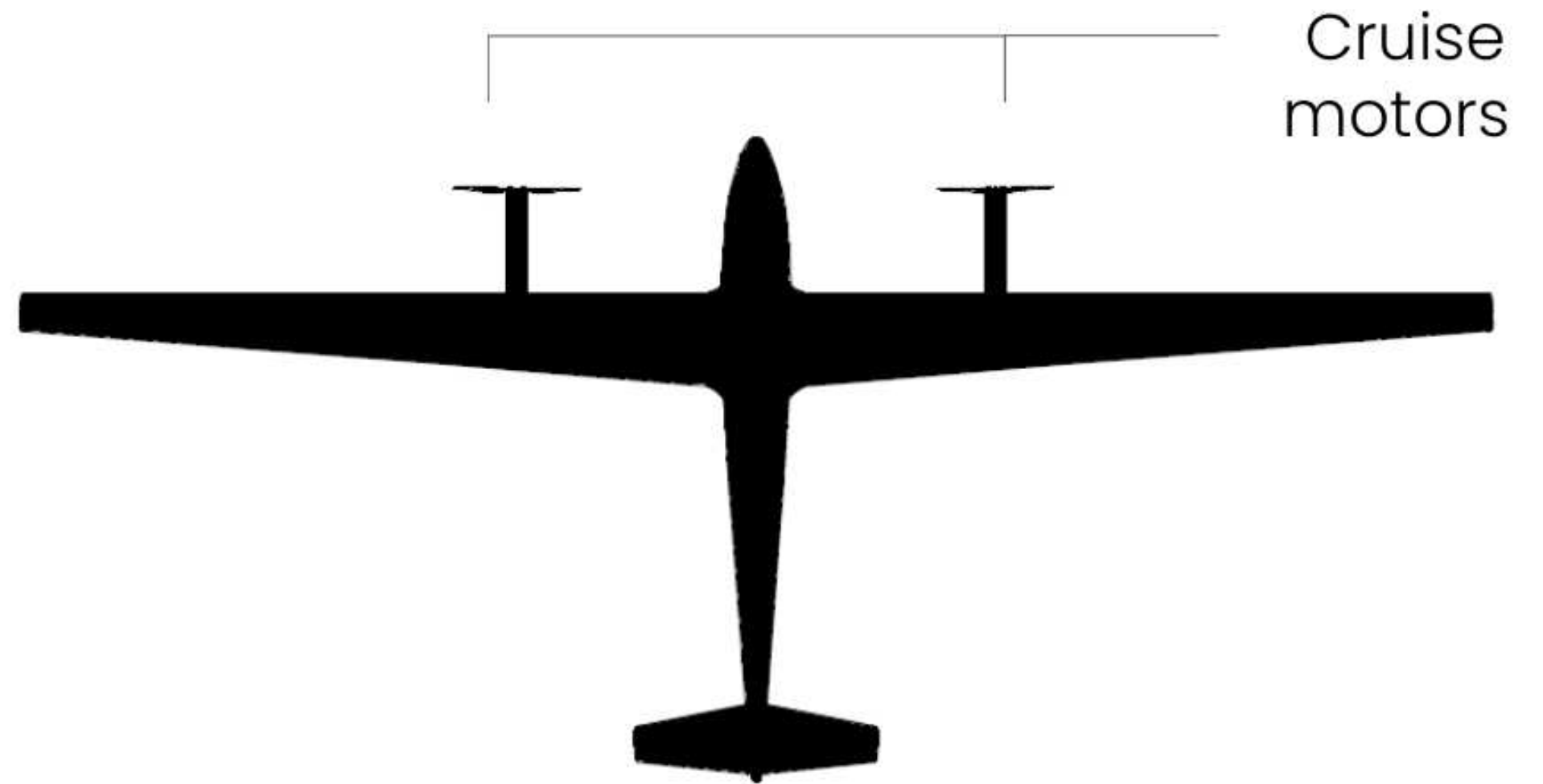
No parasite aerodynamic drag



THE Kaboom AERODYNAMIC SOLUTION

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

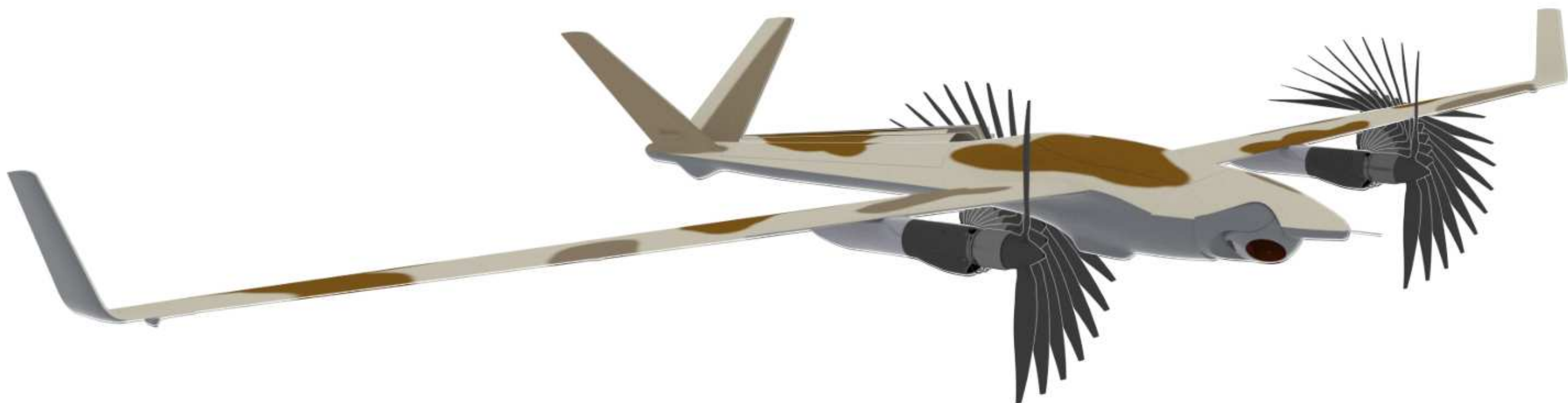
No parasite aerodynamic drag



T R A N S F O R M



T R A N S F O R M



PW

10

SSE 78
13/08/16



PW

10

Site 78
PW-34.0



FW

30

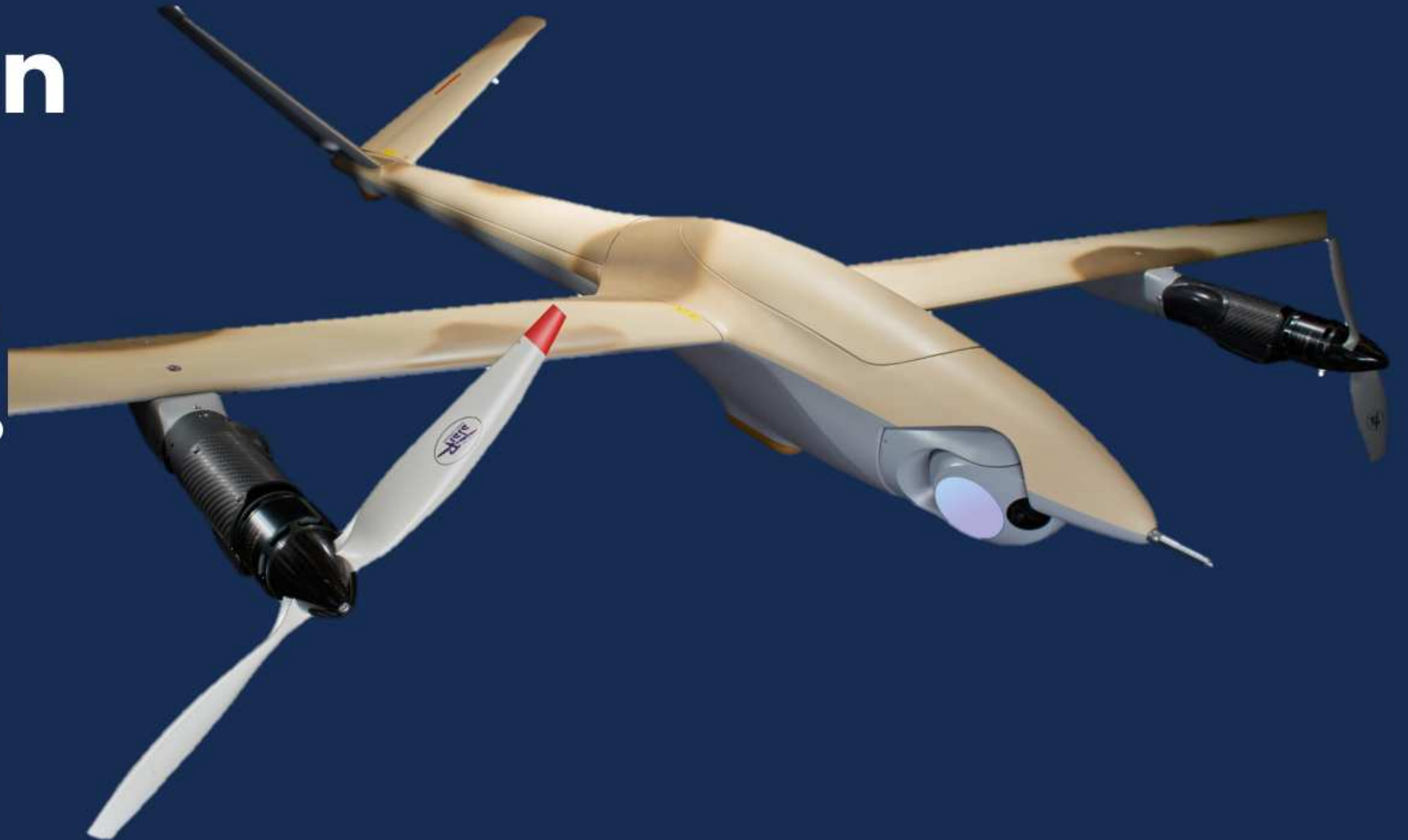
SR 18
FW 18.0





Aerodynamic Payload Integration

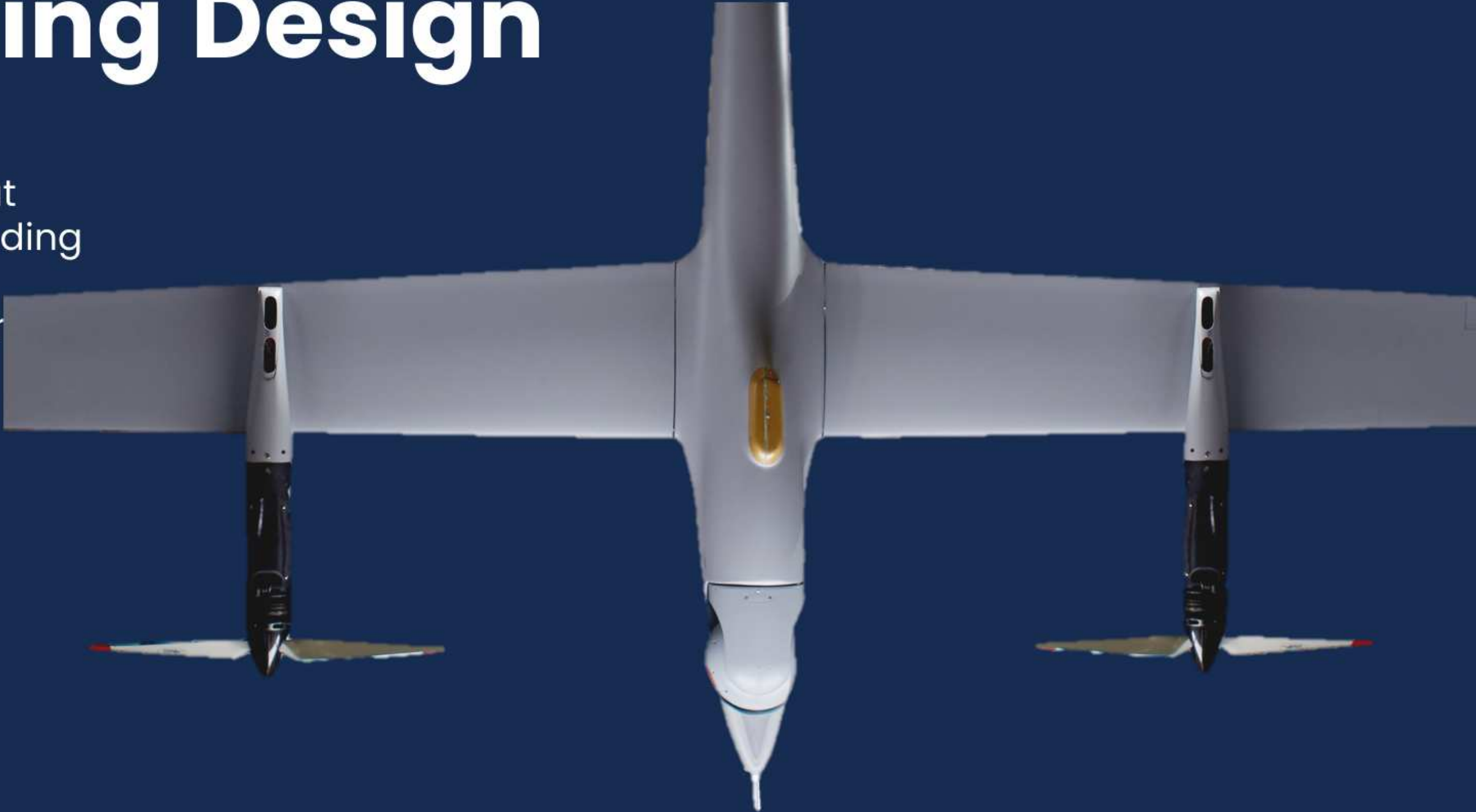
Designed in-house,
the Kaboom VTOL and
its EO/IR payload are
perfectly integrated to
minimize drag



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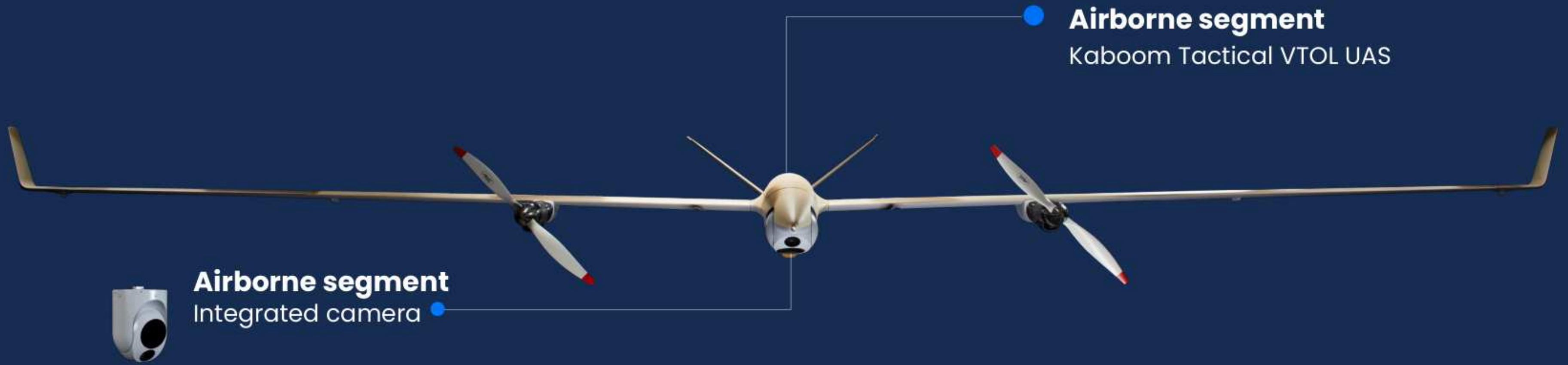
Aerodynamic Landing Design

A design that
removes landing
gear and
minimizes dr



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System Composition



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



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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



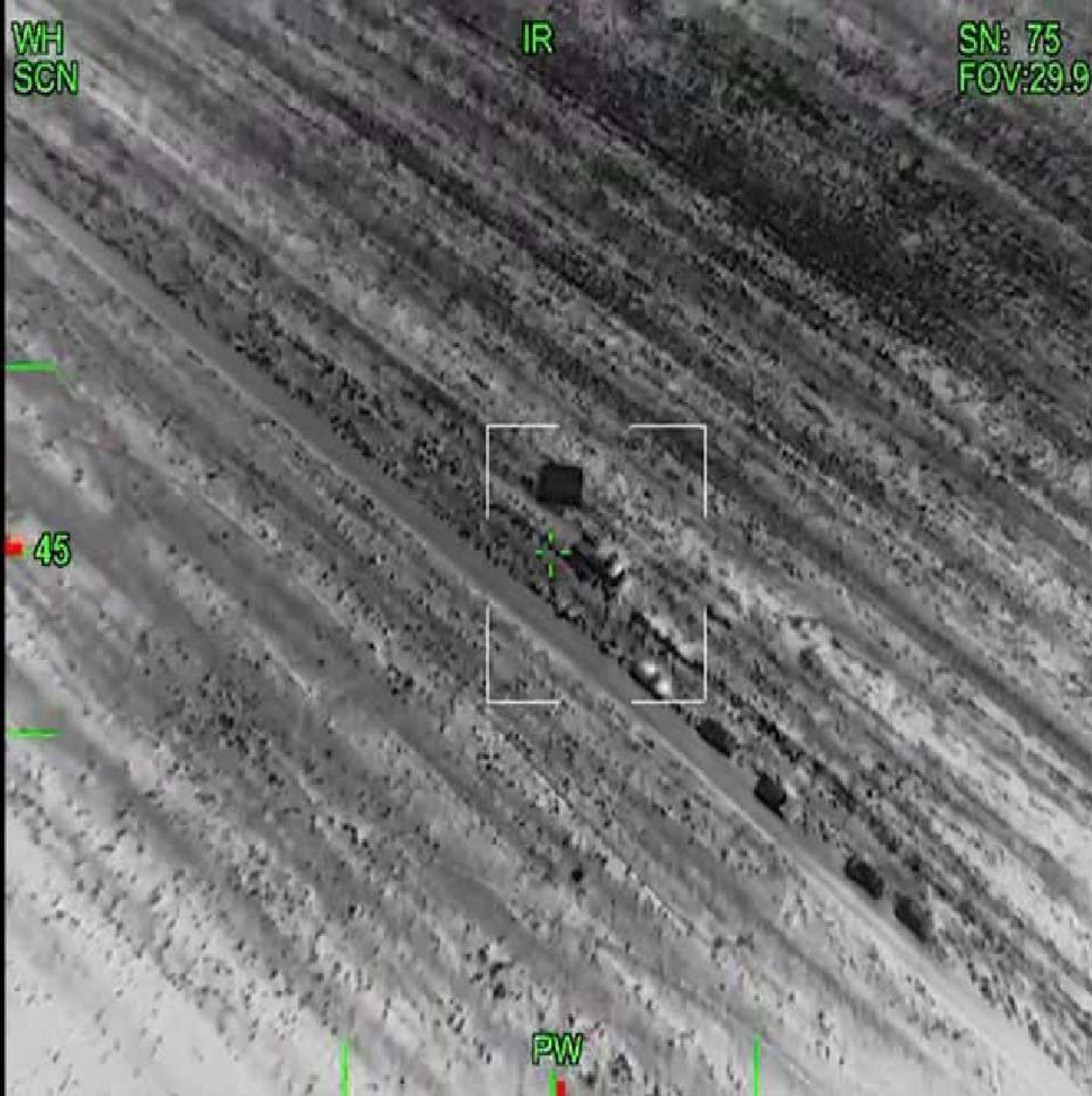
Technical
Specs

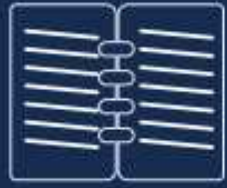
Thermal channel

Continuous
optical zoom



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Technical
Specs

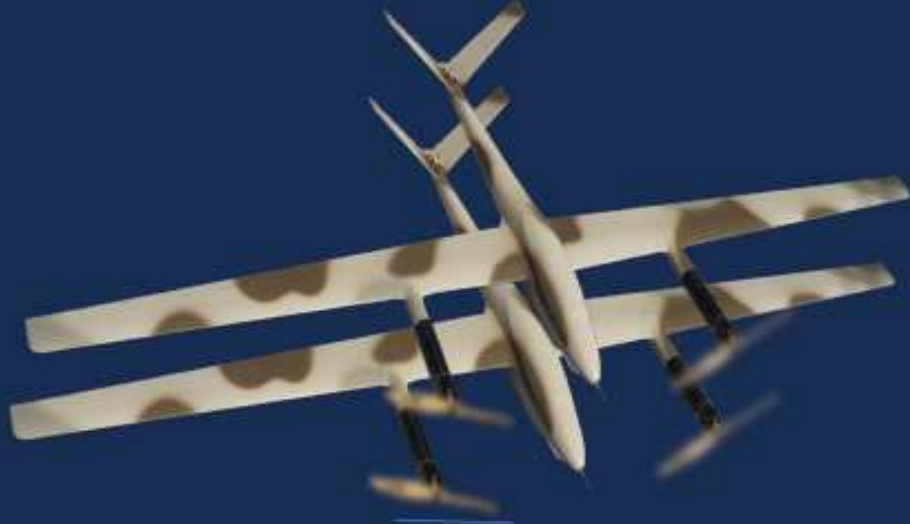
Day channel
Optical zoom &
Auto Tracking



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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



Ground Control Station (GCS)

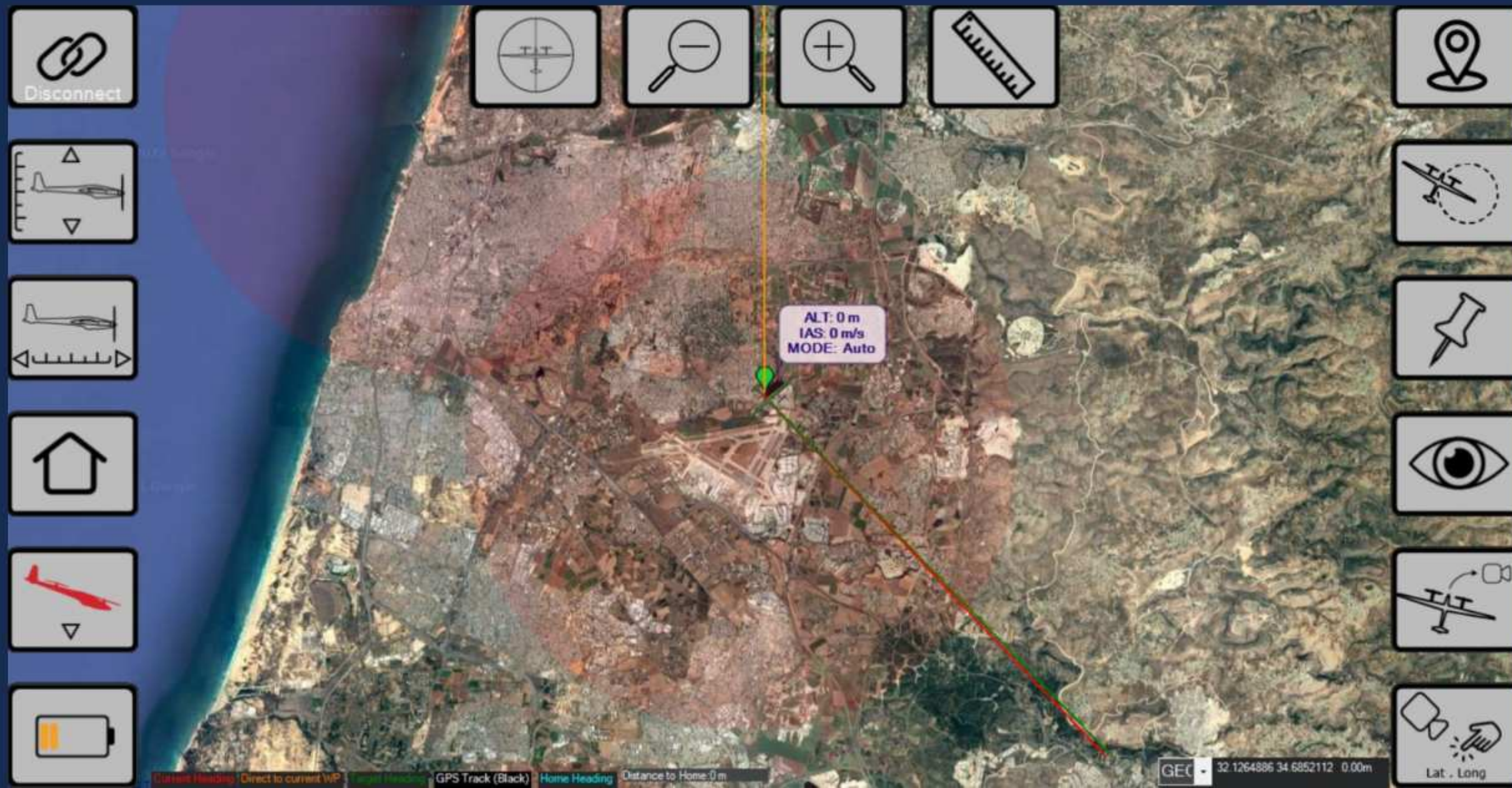
- **Designed for maximum mobility**
- **Equipped with ruggedized touch-screen tablet PC running an advanced powerful mission software**
- **Designed for outdoor, all-weather operation**
- **Tailored for ease**



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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**



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