

SABER

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■ NATIONAL INSTITUTE OF STANDARDS
AND TECHNOLOGY

■ FLIGHT & PAYLOAD CHALLENGE

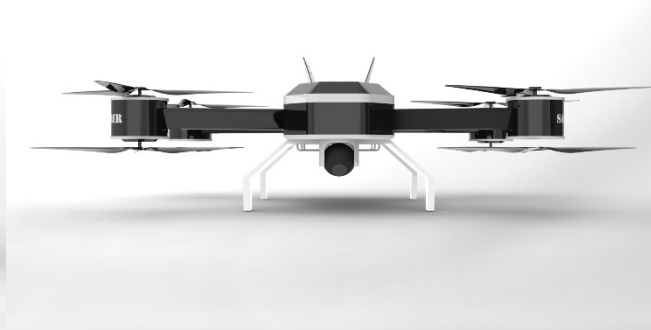


ADDIEL SITAL, CEO/FOUNDER

Drone Specifications

Saber Cargo X-1:

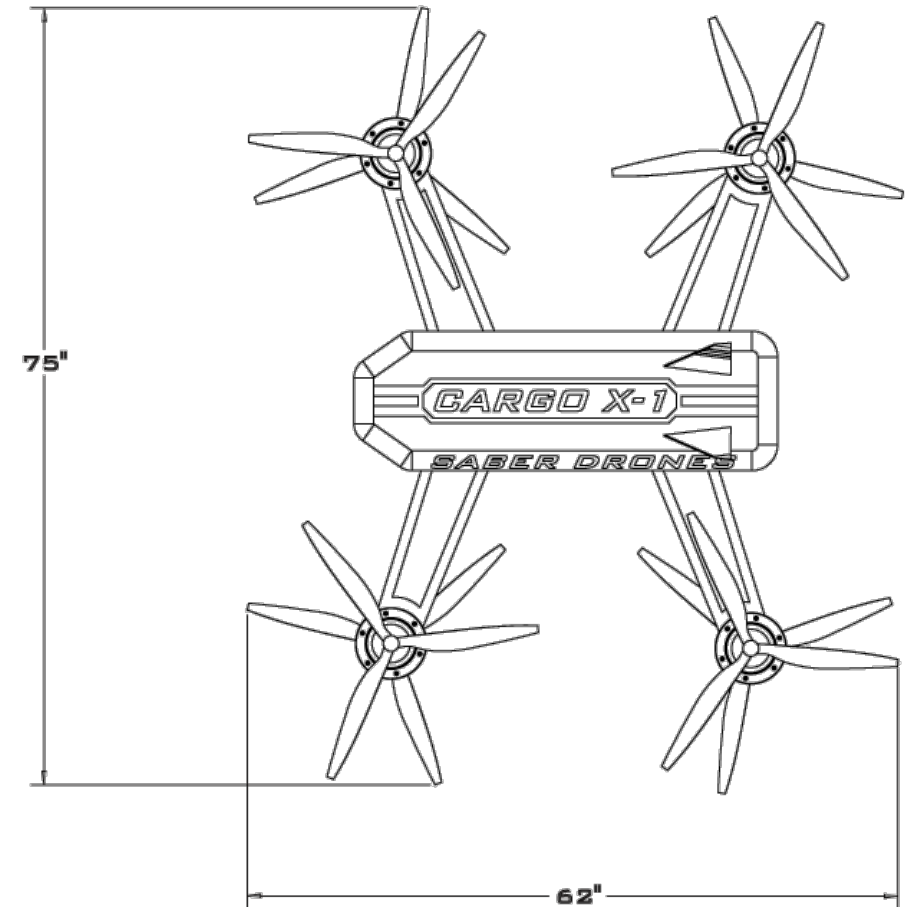
- **Primary Function: Package and equipment moving**
- ~60 lbs. Payload
- 4-6 hr. +. Flight Time
- Onboard Gas Engine (Intellectual Property)
- 3 km Flight Radius
- 9,000 ft. Flight Ceiling
- 50 mph Flight Speed
- Gimbal Mounted 4k Flight Camera
- Customizable Lifting Undercarriage
- Automatic Take Off & Landing
- Automatic Fly Home Feature



Drone Specifications

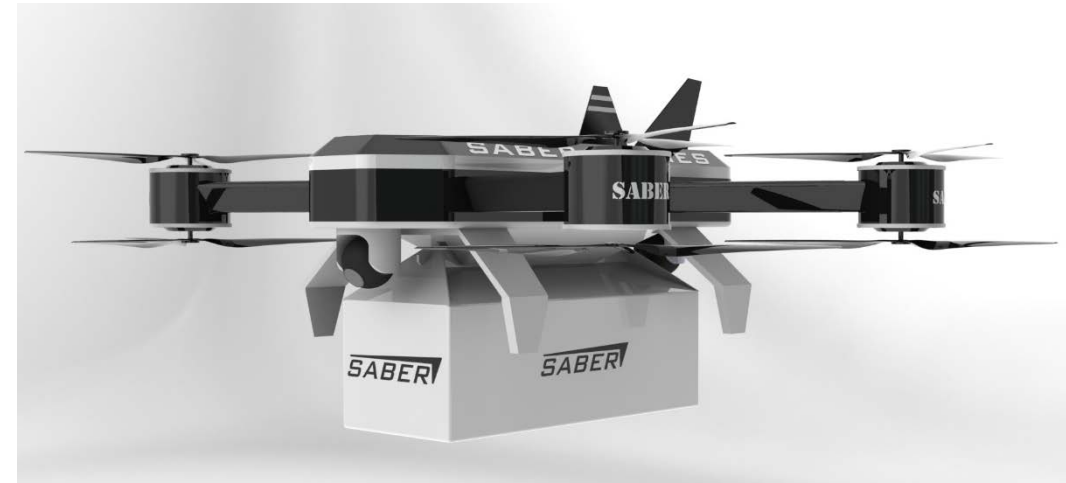
Saber Cargo X-1:

- Size 72" x 62" x 24"H
- 30" Tri-Propellers
- 8 Independent high torque motor assemblies
- 8 -100 amp ESC's

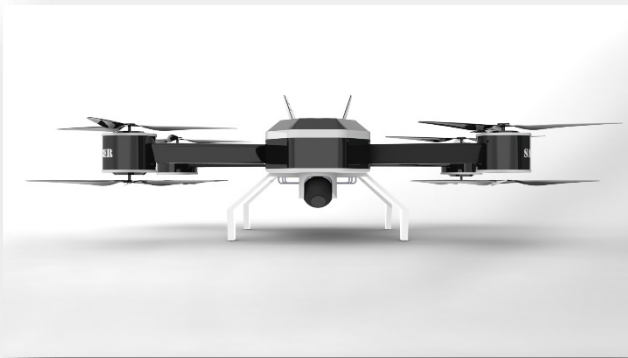


Challenge – Increase Flight Times and Payload

- All drones on the market have 20-35 minute flight time.
- Majority have a very low payload carry weight.
- Short flight times and minimal carry weight, make the package carrying drone an inefficient way to move items.
- The larger drones that can carry heavy weight, can only do so for ~20 minutes, before depleting their entire battery bank.



Solution – Onboard Gas Powered Engine



Cargo X-1:

With a onboard gas engine it is capable of lifting +60 lbs. with a 4-6 hr. flight time. Depending on payload weight.



12" x 30" Carry Tote:

Carry tote rated for 70 lbs. It can be fully customized with logos, barcode packing slips, internal dividers, etc...



Delivery Drone Tracking:

Gimbal mounted 4k camera allow pilots to watch their package and control flight in real time

Estimated Lifting Capability

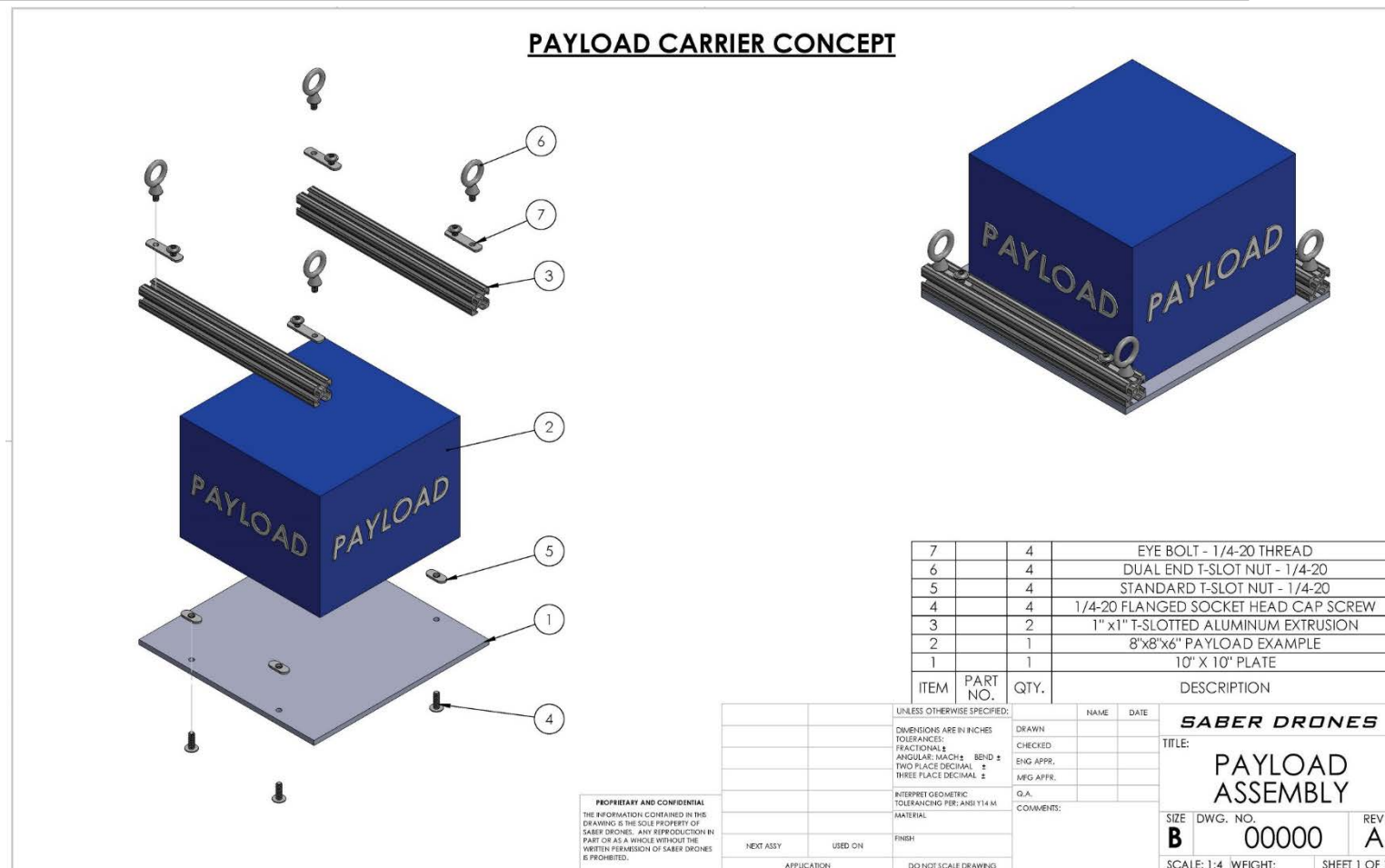
Saber Cargo X-1:

Pounds Of Thrust/Rotor	% of throttle power	lbs. of Trust 8 Rotors
6.6	55	52.8
7.9	60	63.2
9.43	65	75.44
12.37	75	98.96
15.6	85	124.8
20.53	100	164.24



Payload Adapter Concept

- Extrusions and fasteners specified on challenge summary were used in this Payload Adapter Concept.
- Design will change based on technical specification of payload adapter from Challenge administrators



Addiel Sital - CEO/Founder

Professional Experience:

- **Director of Operations –ViralInsight LLC. (Current -1.5 years)**
 - Oversees Design, Engineering, and Manufacturing for both of Virainsight's manufacturing facilities.
 - Charged with implementing Six Sigma and Lean Manufacturing processes.
 - Designed Vira Insight's 350,000 sq. ft. Plastics and Metal fixture manufacturing plant in Coppell, TX (Design done in Solid Works)
- **Director of Operations – Manchester Industries Inc. (2 years)**
 - Oversaw manufacturing operations for Manchester's 5 paper converting plants
 - Responsible for implementing Lean Manufacturing and creating a standardized manufacturing process for Manchester.
- **Director of Engineering – American Standard Brands Inc. (6 years)**
 - Charged with leading the Design and Manufacturing engineering teams for American Standard's bathing/lifestyle line.
 - Developed several flagship product lines and received multiple design patents
 - Designed American Standards 150,000 sq. ft. Walk-in bath tub manufacturing plant in Grand Prairie, TX (Design done in Solid Works)
- **Drone Experience:**
 - Has custom built several racing drones
 - Avid photography drone pilot