

AUTONOMOUS AIRBORNE FREIGHT NETWORK

THE FUTURE

<u>AQ-RA1</u>



AQ-RA1

The **AQ-RA1** is a robotic systems that can land and launch autonomous **fixed-wing** delivery aircraft with payloads up to 400 lbs. from a small physical footprint. Installed on parking lots, building rooftops, larger trucks, ships, islands or even other mobile vehicles, these systems provide a unique capability to operate energy efficient, long range, fixedwing Unammed Aerial Systems (UASs) for transport. They can be installed in strategic geographical locations to create an efficient distribution and delivery network.



The AQ-CV1 is a fixed-Wing **UAS** that is ~5 times more efficient and 2-3 times faster than Rotary or Vertical Take-Off and

Unmanned Aerial System (UAS) with modular bays to handle payloads



Landing (VTOL) drones. It is modified to allow easy loading / unloading of payloads. Modular bays detach from and attach to the underbelly of the AQ-Cv1, completing it's body. Compartments in the modular bays are package-friendly for safe transport and can be reconfigured to hold various sizes of payload. Our technology will assist with the loading, unloading, attachment and detachment of these modular cargo bays to the underbelly of the AQ-Cv1.

<u>AQ-CV1</u>

TECHNOLOGY

Aeronamiq's technology uses advanced control systems to safely land and launch **fixed-wing** air vehicles. During landing, the kinetic energy of incoming fixed-wing air vehicles is dissipated and stored. This energy is utilized to assist in the relaunch of these UASs, enabling efficient landing and take-off from various zones without the need for large-scale infrastructure such as runways and airports. While our vision is to ultimately move towards clean energy technology, both **all-electric** and **fuel-injected** UASs will be in operation initially.

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CONCEPT OF OPERATION

Stage 1: Packages received are loaded via modular, detachable, payload bays on to one of our Fixed-Wing UASs

Stage 2: Fixed-Wing UASs are launched to the destination by our robotic technology

Robotic Launch





Detachable Payload Bay for convenient loading Rotating base allows UAS launch in any direction

Peak speed of 100mph

Stage 3: UASs are captured at the destination by robotic technology installed on rooftops of cityscapes, parking lots, islands, ships, mobile vehicles, or other strategic locations.

Stage 4: UASs remain docked with the robotic system allowing unloading of packages at locations close to the final delivery destination within the hour.



Unloading of Docked UAS for distribution



Robotic system can capture UAS in any direction, mitigating wind effects.





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The AQ-CV1 is a fixed-Wing **UAS** that is ~5 times more efficient and 2-3 times

<u>Unmanned Air Vehicle (UAV) with modular bays to handle payloads</u>



faster than Rotary or Vertical Take-Off and Landing (VTOL) drones. It is modified to allow easy loading / unloading of payloads. Modular bays detach from and attach to the underbelly of the AQ-Cv1, completing it's body. Compartments in the modular bays are package-friendly for safe transport and can be reconfigured to hold various sizes of payload. Our technology will assist with the loading, unloading, attachment and detachment of these modular cargo bays to the underbelly of the AQ-Cv1.



Specifications

Parameter	Value
Payload	Up to 225 Kgs
Range	Up to 200 miles
Power	Rotax 503, 4GPH
Wingspan	9.6 m
MTOW	363 kg
Endurance	3.5 - 8.5 hrs, 17 Gallons
Cruise, Max Speed	85 mph, 100 mph

PAYLOADS / USE CASES

- Manufacturing Sites to Distribution Centers
- Warehouse to Warehouse or Local Delivery
 Centers
- Inspection, Surveillance, Agricultural Uses
- Medical Supplies and Humanitarian Aid
- Ship to Shore Deliveries





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