Introducing the Chaparral: Elroy Air unveils first autonomous hybrid-electric VTOL cargo aircraft

**USA.** Elroy Air, the San Francisco company developing the first end-to-end autonomous vertical take-off and landing (VTOL) aerial cargo system, today unveiled its pre-production Chaparral aircraft.

The Chaparral can autonomously pick up 300-500 pounds of cargo and deliver it by air to a distance of up to 300 miles. Elroy Air said that gives it a capability that pushes beyond the limited payload capabilities of delivery drones and the airport infrastructure required of piloted air cargo options available today.

The company has secured agreements for more than 500 aircraft from commercial, defence and humanitarian customers amounting to more than US$1 billion in aircraft demand.

Elroy Air described the pilotless Chaparral as an “important part of the future of express logistics”, offering the ability to deliver quickly to thousands of previously difficult to reach places.

An early prototype of the Chaparral was flown in 2019, demonstrating several key systems of the aircraft design. The Chaparral system unveiled today features eight vertical lift fans, four distributed electric propulsors.
for forward flight, a high-wing airframe configuration, as well as improved ground autonomy and cargo-handling systems.

The Chaparral is a transitioning ‘lift + cruise’ VTOL aircraft with a full carbon composite airframe, and a turbine-based hybrid-electric powertrain for long-range mission capabilities.

Elroy Air has developed lightweight, aerodynamic modular cargo pods that can be pre-loaded by ground personnel and picked up by the aircraft before takeoff. At the delivery location, the cargo pod is lowered to the ground and released after the system has landed.

The Chaparral system can retrieve another pre-packed pod and transport the pod to its next destination, creating a bi-directional conveyor belt through the sky.

Elroy Air Co-founder and CEO David Merrill said: “Today, we are proud to unveil the Chaparral, a first-of-kind autonomous air cargo system that builds on the more than 100 years of American aviation and aircraft development history.

“The Chaparral is an important part of the future of express logistics. It is built for full end-to-end automation, and it will safely and efficiently make express shipping possible in thousands of new places. It’s a delivery drone that’s faster than ground transport and lower cost than today’s traditional aircraft.”

Mesa Airlines, an American regional airline operating large fleets on behalf of partners including American Airlines, United Airlines, and DHL, has intent to order 150 aircraft to serve the express parcel and healthcare sectors.
The Chaparral has been designed to fit in a 40-ft shipping container for loading on to a Lockheed C-130 Hercules cargo aircraft, enabling it to be quickly shipped and deployed anywhere in the world.

Mesa Airlines Chairman and Chief Executive Officer Jonathan Ornstein said: “I think one of the reasons why this is a moment to deploy the Chaparral system is that the market really requires it. We’re not even creating a market. We are answering a demand that exists in the market today that is currently unanswered.”

He added: “We are increasingly seeing the demand for same and next-day delivery, but so many rural communities have been cut off from the national transportation system. Pilot shortages and environmental regulations make this even more challenging. With the Chaparral, we’re excited to be able to provide autonomous cargo delivery to help reconnect those communities.”

Other confirmed early customers for the Chaparral include the US Air Force and AYR Logistics, a provider of air logistics support to the humanitarian community – including the United Nations – in over 45 countries.
AYR has signed an agreement with Elroy Air to purchase up to 100 Chaparral aircraft to augment and expand its humanitarian logistics business.

Elroy Air is financed by several prominent US venture capital firms and its strategic investors include Lockheed Martin Ventures.

**Note:** The Moodie Davitt Report is set to launch a newsletter dedicated to urban air mobility, one of the most exciting and high-potential elements of the modern global aviation sector. You can read about our move into the subject in this story [here](#).

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