Bell sees nimble autonomous cargo vehicle in flight

August 28 2019, by Nancy Cohen

Bell has cause to celebrate its first autonomous test flight of a delivery drone, which took place in Fort Worth, Texas.

A video titled "Bell APT 70 Autonomous Flight" was posted earlier this week. It shows the machine successfully taking off, flying and landing.

APT stands for autonomous pod transport and, following the success of this test, the company is to continue tests under an "experimental type certificate" through the rest of the year.

Managing Editor in Europe, Paul Ridden, *New Atlas*: The APT 70 is part of Bell's eVTOL family—it takes off like a helicopter and turns to winged flight once airborne. Powered by an electric propulsion system, it is designed to be three times faster than ground vehicles.

A video comment was, "Kinda cool, but that's gonna be a challenge for landing on your doorstep! I can see it now people building drone landing pads on their home with drop boxes for convenience."

"Because of the way it flies, switching from vertical to horizontal orientation for its rotors," said Darrell Etherington in *TechCrunch*, "it can fly much faster than traditional rotor-based aircraft given similar size and power constraints."

The impressive looks of the machine, which inspired some comments such as big bird and stork, indicates more than just playful design. According to Bell, the design was purposed for (1) rapid deployment, (2) quick reconfiguration, and (3) nimble battery swap and recharge.

Aviation International News wrote that the concept "consists of a payload pod that is attached via pylons to two wings, each fitted with four or eight propellers powered by electric motors. The intention is that both pods and batteries can be quickly changed out between missions."

The APT 70 vision is not just to fly out commercial items but also medical supplies.

Etherington said the max speed of the APT 70 was more than 100 mph. The payload capacity is 70 pounds on board. He added that was good for

a fair range of potential applications, not only for package delivery but also for humanitarian and rescue missions.

In further news, Bell is in collaboration with Japan's Yamato, a logistics provider. The two are working to integrate Yamato's package handling system into APT 70 for on-demand services. The Bell and Yamato team conducted a demo to showcase their systems working together.

NHK WORLD said Bell built the aircraft and Yamato made the cargo pod.

Plans are to prepare for entry into service anticipated by the early-2020s.

The Mainichi commented on the collaboration and why it made sense in Japan's marketplace. "The development of such drones comes amid rapid growth in parcel deliveries fostered by the trend for online shopping—the number of deliveries in Japan hit 4.25 billion in fiscal 2017, up 5.8 percent on the previous year, transport ministry data showed."

The drone uses GPS to fly a preset route and comes with cameras and sensors to avoid obstacles, said *NHK WORLD*.

More information: news.bellflight.com/en-US/1817 … st-autonomous-flight