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Unmanned R22 Helicopter In Development For Cargo Delivery

Graham Warwick January 16, 2020



Credit: UAVOS

Unmanned vehicle and autopilot specialist UAVOS is developing a heavy-lift, long-range delivery drone based on the Robinson R22 light helicopter.

The company also is proposing conversion of the Schweizer S300 light helicopter.

Converted to unmanned operation, the two-seat, piston-powered R22 can carry a payload up to 180 kg (400 lb.) and fly up to 1,020 km (550 nm), UAVOS said.

The experimental R22 is in flight testing at a UAVOS customer, the King Abdulaziz City for Science and Technology, a government scientific institution in Saudi Arabia.

According to UAVOS, the specific advantages of the R22 for unmanned cargo operations include long endurance—up to 6 hr.—and its ability to operate in harsh weather, including high winds.

“At the moment we’re working on this project with some customers from America and Canada,” UAVOS said. “We will start the certification process when we have a contract.”

Frontier Systems developed an unmanned version of the R22, called the Maverick, in 1999 as a flight-control system testbed for the A150 Hummingbird long-endurance unmanned aircraft. The [U.S. Navy](#) acquired a handful for

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special operations. Others were used for research.

U.S. startup Skyryse has flown a larger Robinson R44 equipped with autonomous flight control and plans to modify the helicopters for use as urban air taxis.

Another company, Tier 1 Engineering, has modified an R44 to electric propulsion under a project funded by Lung Biotechnology to develop unmanned vehicles to deliver manufactured organs for transplants.

UAVOS sees several potential roles for an unmanned R22 such as delivering lifesaving supplies on search-and-rescue missions, flying in drugs to combat an epidemic and ferrying cargo from a large freighter aircraft to a main logistics base for distribution.

The unmanned R22 can take off and land automatically on any 50 x 50-ft. level space and cruise at 100 mph. The helicopter has a maximum takeoff weight of 635 kg and a payload with full fuel of 40 kg. The unmanned S300 would have a payload of up to 300 kg, range of 1,400 km and endurance of 14 hr.



Graham Warwick

Graham leads Aviation Week's coverage of technology, focusing on engineering and technology across the aerospace industry, with a special focus on identifying technologies of strategic importance to aviation, aerospace and defense.

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