Kratos Names Combat UAVs 'Mako,' 'Valkyrie'

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James Drew

SAN DIEGO—Kratos Defense & Security has settled on names for its two prized combat UAVs, dubbing them “Mako” and “Valkyrie.”

The armed XQ-222 “Valkyrie” combat UAV has enough range to fly from Guam to North Korea on one-way missions: Kratos Defense & Security

The names for the UTAP-22 and XQ-222, respectively, keep with the Kratos tradition of using strong, powerful and some what hyperbolic names for itself and, apparently, its weapon systems. The rebranding comes as Kratos prepares for new flight testing of both models and invests in another manufacturing site for tactical combat aircraft to take pressure off its growing target UAV business in Sacramento, California.

• UTAP-22 ‘Mako’

In coordination with its U.S. government customers, Kratos has branded its 1,400 nm-range Unmanned Tactical Aerial Platform-22 (UTAP-22) Mako, after the world’s fastest killer shark. The armed, reusable autonomous and semi-autonomous combat aircraft is derived from the U.S. Air Force’s BQM-167A subscale aerial target, produced by Kratos’ Sacramento-based Composite Engineering group.

The shark name is probably a nod to the U.S. Navy, which sponsored the aircraft’s first collaborative flight demonstrations with a Marine Corps AV-8B Harrier in late 2015.

The Pentagon’s Defense Industrial Unit-Experimental (DIUx) and Strategic Capability Office have partnered with U.S. Strategic Command to demonstrates the aircraft’s operational utility in a large military exercise later this year.

Speaking to Aviation Week at the company's headquarters here, Kratos President and CEO Eric DeMarco says the shark moniker has been agreed to by all of the sponsors, although no official military designation to replace UTAP-22 has been announced. It is a class of unmanned combat air vehicle (UCAV), but the Navy advised against calling it "UCAV-22" to avoid confusion with its carrier-based surveillance and strike UAV, which has since morphed into an unarmed tanker called MQ-25 Stingray.

The Mako shark is known for its speed and lethal power, emblematic of a 2,000 lb.-class maximum weight, weaponized UAV with the speed and agility of a high-subsonic fighter jet.

• XQ-222 'Valkyrie'

The name Valkyrie has been bestowed upon Kratos' larger XQ-222, an 1,850 mi.-range, reusable UAV being developed for the Air Force Research Laboratory's (AFRL) Low-Cost Attritable Strike Demonstration (LCASD) program.

Just as Kratos took its name from the ancient Greek god of strength and power, a Valkyrie is a mythological Norse figure who chooses who will live and who will die on the battlefield, or "chooser of the slain." Coincidentally, Valkyrie is also the name of a secret plot to kill Adolf Hitler during World War II, and a U.S. Marvel comic book character.

XQ-222 Valkyrie, like the UTAP-22, is rail-launched and recovered by parachute. The aircraft measures 29 ft. tip-to-tail with a 22-ft. wingspan, twice that of the Mako.

The aircraft is distinguished by its low-drag, V-tail design that is shaped for a low radar cross section. It has a maximum speed of March 0.85 and ceiling altitude of 45,000 ft.

"It's low cost when excluding payloads, so depending on the quantities, about $2-3 million per airplane," DeMarco says. "It carries a significant internal payload."

DeMarco says Kratos is building the first three aircraft at its Sacramento facility. One will be delivered to AFRL and two will be owned and operated by the company.

LCASD recently completed a government program review that "went outstandingly well," DeMarco says. "We're on budget and on schedule to fly the airplane in either the second or third quarter of 2018."

Mako and Valkyrie are the cornerstones of Kratos' unmanned systems strategy, whereby low-cost, high-performance target UAVs designed to replicate the speed, agility and countermeasures of adversary warplanes are modified and armed to act as collaborative strike aircraft, or loyal wingmen, operating alongside and controlled by manned aircraft.

They are designed to be low cost and optionally expendable, depending on the mission.

To meet potential demand, Kratos is investing in a separate manufacturing site to relieve pressure on the Sacramento site, which is busy ramping up aerial target UAV manufacturing as new developments, such as the Navy BQM-177, enter low-rate initial production. Kratos has picked two potential sites for the tactical unmanned aircraft center of excellence, and a downselection is expected later this year.

The trend toward smaller, low-cost attritable combat UAVs is being driven by a deficit of manned tactical fighter capacity. This trend is enabled by a new generation of inexpensive and fuel-efficient turbojet and turbofan engines, combined with new sensors, datalinks and autonomous flight control software.