GA-ASI Achieves New Milestone with Semi-Autonomous CCA Flight

YFQ-42A Uncrewed Fighter Jet Executes Mission Autonomy Test

From General Atomics Aeronautical Systems Inc.

SAN DIEGO – 12 February 2026 – General Atomics Aeronautical Systems, Inc. (GA-ASI) passed a new milestone this month, successfully integrating 3rd-party mission autonomy into the YFQ-42A Collaborative Combat Aircraft to conduct its first semi-autonomous airborne mission.

For this test, GA-ASI used mission autonomy software supplied by Collins Aerospace, an RTX business, to fly the new YFQ-42A CCA, designed and developed by GA-ASI for the U.S. Air Force. The Sidekick Collaborative Mission Autonomy software was seamlessly integrated with the YFQ-42A's flight control system, utilizing the Autonomy Government Reference Architecture (A-GRA). The integration enabled robust and reliable data exchange between the autonomy software and the

aircraft’s mission systems, ensuring precise execution of mission autonomy commands.

During the recent testing, autonomy mode was activated via the Ground Station Console (GSC). Once enabled, a human autonomy operator on the ground transmitted various commands directly to the YFQ-42A, which executed the instructions with high accuracy for more than four hours. This test highlights the effectiveness of Sidekick’s advanced mission autonomy capabilities and the flexibility of the A-GRA standard in supporting complex operational requirements.

“We are excited to collaborate with Collins to deliver enhanced autonomous mission solutions,” said David R. Alexander, president of GA-ASI. “The integration of Sidekick with our YFQ-42A demonstrates our commitment to innovation and operational excellence in unmanned aircraft technology.”

This achievement underscores GA-ASI’s dedication to advancing autonomous systems for defense applications. The combination of Sidekick autonomy software and YFQ-42A mission systems, connected through A-GRA, sets new benchmarks for combat autonomy, mission flexibility, operator control, and system reliability.

“The autonomy capabilities showcased in this flight highlight our dedicated investment to advance collaborative mission autonomy,” said Ryan Bunge, vice president and general manager for Strategic Defense Solutions, Collins Aerospace, an RTX business. “The rapid integration of Sidekick onto this General Atomics platform and its immediate ability to support a broad spectrum of combat-relevant behaviors underscores the strength and flexibility of our open systems approach.”

This first mission autonomy flight continues a robust YFQ-42A development schedule for GA-ASI that began in August 2025 with initial flights of YFQ-42A Tail One. In less than six months, GA-ASI has built and flown multiple

YFQ-42A aircraft, including push-button autonomous takeoffs and landings.

GA-ASI has been building and flying uncrewed jets for nearly two decades, beginning with the company-funded, weaponized MQ-20 Avenger® in 2008. Ongoing company investment in Avenger continues to yield results, as the aircraft routinely serves as a CCA surrogate for advanced autonomy development and testing in both government programs and company-funded research and development.

As a family-owned, privately held defense company for more than 30 years, GA-ASI is known as one of the original disruptors in the U.S defense industry, pioneering and inventing many of the technologies now considered ubiquitous in uncrewed aircraft operations around the world. The company re-invests more than 35 percent of annual revenue into internal research and design projects, building ahead of need and designing capabilities ahead of requirements.

In 2025, for example, an internally funded Avenger demo featured both GA-ASI's TacACE autonomy software and Shield AI's Hivemind software on the same flight, with the MQ-20 seamlessly switching between AI pilots while still airborne. Later in the year, GA-ASI teamed with Lockheed Martin and L3 Harris for another Avenger flight demo, connecting the MQ-20 with an F-22 Raptor for an advanced manned-unmanned teaming mission that allowed the human fighter pilot to command the Avenger as an autonomous CCA surrogate via tablet control from the cockpit.

In 2024, GA-ASI first flew its XQ-67A Off-Board Sensing Station (OBSS) jet, developed in collaboration with Air Force Research Laboratory (AFRL). This early CCA prototype validated the "genus/species" concept pioneered with AFRL as part of the Low-Cost Attritable Aircraft Platform Sharing (LCAAPS) program, focused on building several aircraft variants from a common core chassis.

GA-ASI’s Gambit Series envisions multiple missionized variants from this common core concept, with XQ-67A already showcasing airborne sensing and YFQ-42A illustrating air-to-air combat. Using this novel manufacturing approach to drive overall customer value, GA-ASI can quickly pivot to diverse missions with less time and cost investment than building a clean-sheet aircraft.