



Fury: The CCA Program That Revolutionizes the Air Forces

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The Fury is one of the main contenders for the United States Air Force's *Collaborative Combat Aircraft* (CCA) program, which aims to create a fleet of unmanned aircraft to accompany traditional fighters. The program's goal is to enhance the operational capabilities of fighters like the F-22 Raptor and the F-35 Lightning II, improving their versatility and ability to operate in complex scenarios.

The *Collaborative Combat Aircraft (CCA)* is an innovative program developed by the US Air Force with the intent to integrate autonomous aircraft into modern air operations. The goal is to combine human resources and the advanced capabilities of combat aircraft with the versatility and efficiency of autonomous drones. These unmanned aircraft will not only support existing fighters but will also contribute to increasing the overall effectiveness of missions, extending the operational range, improving survivability in high-threat scenarios, and allowing for a quicker and more targeted response to threats.

The program involves the use of autonomous platforms in an integrated *Manned-Unmanned Teaming* (MUM-T) system, where **autonomous drones actively collaborate with piloted aircraft, creating a more dynamic and flexible combat environment.** This combination will allow for greater mobility and firepower, increasing the real-time response capability to variable threats.

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The Fury: A Contender for the CCA and the Future of Autonomous Air Warfare

One of the most promising autonomous aircraft for **the CCA program is the YFQ-44 drone by Anduril, better known as Fury.** This drone represents the latest evolution of unmanned aircraft, designed to work closely with traditional combat fighters. **With a speed of over 1,150 km/h and a maximum altitude of 50,000 feet,** the Fury is built to perform electronic warfare, reconnaissance, air-to-air, and air-to-ground combat missions. The drone is equipped with a Williams International FJ44-4M turbofan engine, which gives it high performance, and can be armed with AIM-120 AMRAAM air-to-air missiles.

One of the most innovative features of the Fury is its **Lattice software, developed by Anduril, which uses artificial intelligence to autonomously analyze data from thousands of sensors and generate a single operational picture.** This system allows the Fury to identify and strike enemy targets quickly and accurately, without the need for direct human intervention. The ability to make autonomous decisions is a key element that makes the Fury an ideal candidate for the CCA program, allowing for optimized real-time resource management.

Another strength of the Fury is its modular design and economical construction. Thanks to the use of off-the-shelf commercial components and the simple design of the landing gear, the drone has a low cost of about 30 million dollars per unit. This makes it extremely accessible and easy to produce on a large scale, significantly reducing costs compared to traditional aircraft while maintaining high performance. Fury is designed to be assembled in virtually any US factory, without the need for advanced machinery or specialized skills, an advantage that makes it perfect for large-scale production.

A System Adaptable to Future Threats

The US Air Force's approach is also distinguished by the use of open architectures and commercial technologies, which will allow for rapid integration and regular system updates. This method will ensure competitive scalability, enabling the air forces to quickly adapt to future challenges while maintaining a technological edge. As emphasized by General David W. Allvin, Chief of Staff of the USAF, "The pace of innovation must outpace the threat." The ability to quickly evolve in response to new operational needs is a key element to ensuring air superiority in ever-changing scenarios.

Next Steps and Program Acceleration

Awaiting the flight tests scheduled for 2025, the US Air Force has already selected **Beale Air Force Base in California as the site for the creation of the first CCA Aircraft Readiness Unit (ARU)**. This unit will be responsible for keeping the CCA aircraft in operational condition with the minimum number of daily operations. Since the drones will be semi-autonomous, the personnel required to manage them will be significantly lower than traditional manned aircraft squadrons, thus optimizing operational efficiency.

The CCA program is gaining increasing attention and interest from industry experts, with the goal of accelerating its realization. The production phase of the first version of the aircraft is scheduled for 2026, while a second phase, which foresees an even more advanced version of the aircraft, is already in planning. Meanwhile, the USAF is continuing the development of innovative solutions, such as in-flight refueling and the optimization of UAV command and control. The integration of autonomous drones into air operations will have a fundamental impact not only on the efficiency of US air forces but also on global military strategy.

Conclusion: Towards an Autonomous Future

The CCA program represents one of the most promising initiatives for the future of air forces. With the integration of autonomous aircraft, the USAF is reshaping the concept of air warfare, enabling a faster, more effective, and less costly response to global threats. Future wars, while still seeing the human operator at the center, will be characterized by an increasingly widespread use of drones and artificial intelligence, forever changing the face of air operations. With the testing and integration of drones underway, the USAF is ready to take the decisive step

towards a new paradigm of air operations, where technology and autonomy will play a crucial role.

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