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U.S. Air Force Collaborative Combat Aircraft (CCA)

What Are Collaborative Combat Aircraft (CCA)?

The U.S. Air Force is developing a new type of uncrewed weapon system called Collaborative Combat Aircraft (CCA). The Air Force plans to fly CCAs alongside new and existing crewed fighter jets to enhance operations in contested airspace. The Air Force describes CCAs, large uncrewed aircraft (UAS) powered by jet engines, as potentially equipped for missions including air-to-air combat; air-to-ground combat; electronic warfare; targeting; and intelligence, surveillance, and reconnaissance. The Air Force has said CCAs' AI-driven software would enable collaboration with, and take direction from, human pilots and that CCAs would serve to expand the fighter fleet and protect human pilots at a lower cost than current fighter jets. This product focuses on Air Force CCA matters; the Navy has begun similar efforts.

CCAs are part of the Air Force's Next-Generation Air Dominance (NGAD) family of systems program (see CRS In Focus IF12805, *U.S. Air Force Next-Generation Air Dominance (NGAD) Fighter*), which also may include a future crewed fighter platform, sensors, weapons, and more. Congress provided \$678 million in mandatory funding in the FY2025 reconciliation act (P.L. 119-21, §20007) for CCA development. For FY2026, the Air Force requested \$111.4 million in discretionary funding for CCA research, development, test, and evaluation (RDT&E). Congress may approve, reject, modify, or choose not to act on the request.

Changing Concept of Operations

Military aircraft are generally expensive to develop, buy, and operate. Since the 1990s, the size of the U.S. Air Force's fleet has decreased, in part because of such costs. Air Force officials have estimated that CCAs might cost roughly one-third the price of crewed fighters. Service officials also indicate that training on CCAs could occur virtually, so the airframes themselves would fly less, potentially leading to lower maintenance and sustainment costs. The potential savings may allow the Air Force to purchase CCAs in larger quantities than it could buy crewed fighters. China's development of anti-access/area-denial (A2/AD) capabilities, such as long-range missiles and sophisticated air defense systems, has challenged the U.S. Air Force's ability to achieve air superiority (i.e., the ability to control a certain air space to conduct operations without prohibitive interference from air and missile threats). A tactical fighter fleet that includes CCAs and crewed combat aircraft could potentially help the Air Force to gain air superiority by overwhelming air defenses. The Air Force is pursuing a concept of operations—similar to those being implemented by other branches of the military—called agile combat employment (ACE). Under the ACE concept, operations shift from large, centralized physical infrastructures to a network of dispersed locations.

CCAs in those dispersed locations could help the Air Force add sensors or long-range weapons to its combat aircraft fleet. According to Air Force Chief of Staff General Kenneth S. Wilsbach, CCAs could assist U.S. forces in achieving air superiority in contested environments partly by confusing enemy aircraft. A 2025 Air Force report to Congress on Tactical Fighter Aircraft Force Structure describes the platform as an enhancement to, not replacement for, crewed aircraft: "Paired with fifth-gen fighters in a counter air role, CCA will be key to controlling future highly contested environments."

Acquisition

During the past decade, the Air Force, the Defense Advanced Research Projects Agency, and the Air Force Research Laboratory conducted numerous efforts to develop and test autonomy, software, and modular upgradable platforms. In 2023, an Air Force official described notional plans to eventually acquire 1,000 CCAs, based on the assumption of pairing two CCAs with each of approximately 500 advanced crewed fighters. In 2024, the Air Force awarded initial contracts to five companies to design and build CCAs: Anduril, Boeing, General Atomics Aeronautical Systems (GA-ASI), Lockheed Martin, and Northrop Grumman. Later in 2024, the Air Force announced that two of those companies—Anduril and GA-ASI—won contracts to build Increment 1 production-representative test articles (see **Figure 1** and **Figure 2**). The Air Force planned to order more than 100 CCAs for Increment 1 over five years. The Air Force plans to field an operational CCA capability by the end of the decade.

Increment 1

Figure 1. Anduril YFQ-44A



Source: Anduril.

Anduril. In 2023, Anduril purchased Blue Force Technologies, a company that had developed a large UAS called Fury. Anduril stated it invested in Fury to make it "a high-performance, multi-mission" aircraft that could serve as CCA. In January 2025, Anduril announced plans to manufacture Fury at a new factory in Columbus, OH. Anduril is integrating the Fury platform with its Lattice open systems software program to enable human-machine

teaming. In March 2025, the Air Force announced the designation of the company prototype as the YFQ-44A. In October, Anduril announced that the YFQ-44A, designed to be semi-autonomous, made its first flight.

Figure 2. GA-ASI YFQ-42A



Source: GA-ASI.

GA-ASI. GA-ASI officials have said that the company based its CCA bid on an experimental platform, called the XQ-67A, which emphasized endurance over speed and maneuverability. In 2024, a GA-ASI official said that production of its first CCA had begun. In March 2025, the Air Force announced the designation of the GA-ASI prototype as the YFQ-42A. On August 27, the first pre-production prototype YFQ-42A flew for the first time.

Both test articles are undergoing developmental testing in California and operational assessments with an Experimental Operations Unit (EOU) at Nellis Air Force Base (AFB), NV. In May 2025, the Air Force announced Beale AFB, CA, as the preferred location for a CCA Aircraft Readiness Unit ready for rapid deployment.

Increment 2

The Air Force has reportedly stated that preliminary work has started on Increment 2. The service plans to work with more than 20 companies, including those not initially selected for Increment 1, for this phase of work. An Air Force official reportedly said the service may award Increment 2 contracts in early FY2026 to several companies, potentially including foreign companies. Multiple companies have reportedly developed competing concepts.

FY2025-FY2026 Funding

The Senate Appropriations Committee (SAC), in its report accompanying the Department of Defense Appropriations Bill, 2025 (S. 4921; S.Rept. 118-204), recommended transferring funding for CCA from the Next Generation Air Dominance (NGAD) budget line to its own. In FY2025, the Full-Year Continuing Appropriations and Extensions Act, 2025 (P.L. 119-4), as detailed in department budget documents, provided \$711.7 million in discretionary funding for CCA RDT&E. In addition, the FY2025 reconciliation act (P.L. 119-21, §20007) provided \$678 million in mandatory funding for CCA RDT&E. The Air Force included this mandatory funding amount in its FY2026 budget request for CCA. Separately, for FY2026, the Air Force requested \$126.4 million in discretionary

funding for CCA, including \$111.4 million in RDT&E and \$15 million for procurement. Including both mandatory and discretionary funding, the Air Force identified \$804.4 million in FY2026 funding for CCA. DOD is operating through January 30, 2026, under the Continuing Appropriations, Agriculture, Legislative Branch, Military Construction and Veterans Affairs, and Extensions Act, 2026 (P.L. 119-37).

Selected FY2026 Legislative Activity

NDAA. The House-passed Streamlining Procurement for Effective Execution and Delivery and National Defense Authorization Act for Fiscal Year 2026 (NDAA; H.R. 3838), would authorize the requested amount of funding for CCA. The accompanying House Armed Services Committee report (H.Rept. 119-231) directs a briefing on planned CCA mission sets and resulting cost, schedule, and operational considerations; human machine interfaces and pilot vehicle interfaces for CCA operators; and the ability to scale prototypes to full-scale production. The Senate-passed version of the bill (S. 2296) would authorize \$789.4 million in Air Force RDT&E funding for CCA. The accompanying Senate Armed Services Committee report (S.Rept. 119-39) directs a briefing on plans for integrating the F-35 aircraft and the National Guard and Reserve into the CCA operations structure; and a report on whether the EOU duplicates other testing efforts.

Appropriations. The House-passed Department of Defense Appropriations Act, 2026 (H.R. 4016) would provide \$494.9 million in Air Force RDT&E funding for CCA, according to the accompanying House Appropriations Committee report (H.Rept. 119-162). The report directs quarterly briefings on the status of the CCA program. The Senate Appropriations Committee-reported bill (S. 2572), would provide the requested amount funding for CCA, according to the accompanying report (S.Rept. 119-52).

Issues for Congress

Congress will have a role in considering, with the Air Force, the number of CCAs to be acquired and may provide oversight over the development of current and future prototypes. Members of Congress may or may not oversee how CCAs may interoperate with potential NGAD fighters and other combat aircraft in the Air Force fleet and with the other military departments. CCAs are intended to have some level of autonomy, with humans involved in their operation. As AI-enabled software technology progresses, future CCAs may be able to respond faster and more effectively to battlefield changes than human operators. Members may consider the risks and benefits of relying more heavily on autonomy. Congress may also consider whether the Air Force has adequately planned for procurement, testing, manufacturing, and employment of CCAs in large numbers, as well as the challenges of storing and transporting hundreds of large UAS. Congress could also consider seeking a report from the Air Force on CCA storage and sustainment plans.

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