



USAF-588: All Home Grown

SPONSORING ORGANIZATION

United States Air Force

CHALLENGE

Security Forces need a way to access low-cost, National Defense Authorization Act (NDAA) compliant drones to support testing, training, and expendable use cases—without relying on expensive or restricted systems.

RELEVANT CONTEXT

- There is an increasing need for in-house, expendable drones that can be cheaply built, tested, and flown without fear of loss—particularly for training, experimentation, and early-stage concept testing.
- NDAA compliance is mandatory, meaning all drone components must be sourced from the U.S. or trusted coalition partners, and cannot include parts from adversary nations. These restrictions significantly narrow the parts supply chain.
- While some commercial solutions exist (e.g., \$3,000 per drone), they often use non-compliant parts, making them unsuitable for government or military applications.
- By contrast, NDAA-compliant options like the Army's \$12,000 homegrown drones are too expensive to use for high-risk or expendable purposes.
- The ideal solution would allow teams to build low-cost, replicable, and modular drone platforms that can be easily assembled without advanced technical skills. Current designs often require soldering, lack interchangeable or durable components, and don't support varied body types—including options that protect propellers or accommodate both line-of-sight (LOS) and first-person view (FPV) configurations.
- If achieved, this would enable rapid iteration, reduce barriers to drone experimentation, and create a sustainable, compliant pipeline for drone-based training and tactical readiness.

IMPACT

If this problem were solved, teams could fly affordable, compliant drones at scale—supporting training, experimentation, and tactical needs without relying on expensive or restricted systems.

POTENTIAL BENEFICIARIES

Security Forces, Drone Operators, Training Units, Maintenance Personnel, Acquisition Teams

TEAM RECOMMENDED SKILL SETS

Aerospace Engineering, Mechanical Engineering, Public Policy, Electrical Engineering, Additive Manufacturing



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